Draft
John Day Basin Resource Management Plan and Environmental Impact Statement
Volume II: Appendices

BLM
Prineville District Office
2008

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

U.S. Bureau of Land Management
John Day Basin RMP
3050 NE 3rd Street
Prineville, Oregon 97754
541-416-6700
Email: John_Day_Basin_RMP@blm.gov
Website: http://www.blm.gov/or/districts/prineville

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Appendices

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Appendix A: Planning and Implementation Authorities

This section briefly describes the legal authorities and planning guidance that provide direction for the BLM land use planning process. These, when combined with the purpose and need for action, establish the scope of the land use plan and set the framework for the decisions to be made in the John Day Basin Environmental Impact Statement and Resource Management Plan. This direction may come from several sources, including Congress, the President, or the Legislature. Guidance and information on how to implement these directives and laws are developed by resource management agencies such as the BLM, and the departments that oversee them, such as the Department of the Interior.

The following is a list of the primary legal authorities relevant to the John Day Basin RMP:

1. The *Federal Land Policy and Management Act of 1976* (FLPMA), as amended, 43 U.S.C. 1701 et seq, provides the authority and basic guidance for BLM land use planning. The act mandates that public lands be managed for multiple uses in a manner that protects ecological values, maintains their natural condition and provides food and habitat for wildlife.
2. The *National Environmental Policy Act (NEPA)*, as amended, 42 U.S.C. 4321 et seq., requires the consideration and public availability of information regarding the environmental impacts of major Federal actions significantly affecting the quality of the human environment. This includes the consideration of alternatives and mitigation of impacts.
3. The *Clean Air Act*, as amended, 42 U.S.C. 7418, requires Federal agencies to comply with all Federal, State and local requirements regarding the control and abatement of air pollution. This includes abiding by the requirements of State Implementation Plans.
4. The *Clean Water Act*, as amended, 33 U.S.C. 1251, establishes objectives to restore and maintain the chemical, physical, and biological integrity of the Nation's water. BLM is recognized as a Designated Management Agency responsible for compliance with the Clean Water Act on BLM-administered lands and in so doing must comply with the State of Oregon anti-degradation policy (OAR 340-41-0004). The anti-degradation policy prohibits BLM from degrading water quality in waters of the state.
5. The *Federal Water Pollution Control Act*, 33 U.S.C. 1323, requires the Federal land manager to comply with all Federal, State, and local requirements regarding the control and abatement of water pollution in the same manner and to the same extent as any non-governmental entity.
6. The *Safe Drinking Water Act*, 42 U.S.C. 201, is designed to make the Nation's waters "drinkable" as well as "swimable." Amendments establish a direct connection between safe drinking water, watershed protection, and management.
7. The *Public Water Reserve No. 107* was signed by President Calvin Coolidge on April 17, 1926. The order withdrew certain lands from settlement, location , sale, or entry, and reserved them for public use. The lands withdrawn are those in public ownership at the time of the act, and those with vacant, unappropriated land containing a spring or waterhole, and all land within one quarter of a mile of every spring or waterhole.
8. The *Endangered Species Act* (ESA) of 1973 (16 U.S.C. 1531 et seq., as amended, directs BLM to 1) conserve Threatened and Endangered Species and the ecosystems upon which they depend, and 2) not contribute to the need to list a species.
9. *BLM Manual 6840, Special Status Species Management* provides guidance for meeting the requirements of the Endangered Species Act. This guidance directs the BLM to take actions to progress towards the conditions indicating attainment of the Fundamentals of Rangeland Health (described in 43 CFR 4180.1) and associated Standards (43 CFR 4180.2).
10. The *Sikes Act* of 1974, as amended (16 U.S.C. 670 et seq.), provides for the conservation, restoration, and management of species and their habitats in cooperation with State wildlife agencies.

11. *Bald Eagle Protection Act* 16 U.S.C. §§ 668-668d, June 8, 1940, as amended 1959, 1962, 1972, and 1978: Prohibits the taking or possession of and commerce in bald and golden eagles, with limited exceptions.
12. The *Pacific States Bald Eagle Recovery Plan* (USFWS 1986) covers the states of Washington, Oregon, Idaho, Montana, Wyoming, California and Nevada. The Plan established recovery population goals, habitat management goals, and 47 management (recovery) zones. The High Cascades and Blue Mountain Zones (zone 11 and 9 respectively) includes the John Day Resource Management Planning Area. The Pacific States Bald Eagle Recovery Plan described specific criteria for the Pacific Recovery Area (PRA) as necessary for delisting.
13. The *Wild and Scenic Rivers Act*, as amended, 16 U.S.C. 1271 et seq., requires the Federal land management agencies to identify river systems and then study them for potential designation as wild, scenic, or recreational rivers.
14. The *Wilderness Act*, as amended, 16 U.S.C. 1131 et seq., authorizes the President to make recommendations to the Congress for Federal lands to be set aside for preservation as wilderness.
15. The *Antiquities Act of 1906*, 16 U.S.C. 431-433, provides guidance for protecting cultural resources on Federal lands and authorizes the President to designate National Monuments on Federal lands.
16. The *National Historic Preservation Act* (NHPA) of 1966, as amended, 16 U.S.C. 470, expands protection of historic and archaeological properties to include those of national, State, and local significance and also traditional cultural properties, and directs Federal agencies to consider the effects of proposed actions on properties eligible for or included in the National Register of Historic Places.
17. The *Archaeological Resources Protection Act of 1979* (ARPA) 16 USC 470, as amended, defines and provides for the protection of archaeological resources on Federal lands, irrespective of eligibility for the National Register of Historic Places, establishes a permit system for resources over 100 years old, and requires agencies to provide for public education and continuing inventory of Federal lands.
18. *Executive Order 11593 of 1971*, directs Federal agencies to inventory public lands and to nominate eligible properties to the National Register of Historic Places.
19. *Executive Order 13287 of 2003* (Preserve America), directs Federal agencies to provide leadership in preserving America's heritage by actively advancing the protection, enhancement, and contemporary use of historic properties managed by the Federal Government, and by promoting intergovernmental cooperation and partnerships for the preservation and use of historic properties, and establishing agency accountability for inventory and stewardship.
20. *Native American Graves Protection and Repatriation Act of 1990*, 25 U.S.C. 3001, establishes rights to Indian tribes and Native Hawaiians to claim ownership and repatriate human remains, and also funerary, sacred, and other objects, controlled by federal agencies and museums. Agency discoveries of such "cultural items" during land use activities require consultation with appropriate tribes to determine ownership and disposition.
21. The *Treaty with the Tribes of Middle Oregon signed June 25, 1855*, ratified March 8, 1859 (14 STAT. 751), reserved rights for the Confederated Tribes of Warm Springs to fish, off-reservation, at usual and accustomed stations and to hunt, gather resources, and pasture animals on public lands in common with other citizens of the United States.
22. The *Treaty with the Walla Walla, Cayuse, Etc., signed June 9, 1855*, ratified March 8, 1859 (12 STAT. 945), reserved rights for the Confederated Tribes of the Umatilla Indian Reservation to fish, off-reservation, at usual and accustomed stations and to hunt, gather resources, and pasture animals on public lands in common with other citizens of the United States.
23. The *American Indian Religious Freedom Act of 1978*, 42 U.S.C. 1996, establishes a national policy to protect and preserve the right of American Indians to exercise traditional Indian religious beliefs or practices including but not limited to access to religious sites. Agencies are to avoid unnecessary interference with traditional tribal spiritual practices. Also, compliance requires consultation with tribes when land uses might conflict with Indian religious beliefs or practices.
24. The *Recreation and Public Purposes Act*, as amended, 43 U.S.C. 869 et seq., authorizes the Secretary of the Interior to lease or convey BLM managed lands for recreational and public purposes under specified conditions.

25. The *Onshore Oil and Gas Leasing Reform Act*, 30 U.S.C. 181 et seq., provides:
    a. Potential oil and gas resources be adequately addressed in planning documents;
    b. The social, economic, and environmental consequences of exploration and development of oil and gas resources be determined; and
    c. Any stipulations to be applied to oil and gas leases be clearly identified.
26. The *General Mining Law*, as amended, 30 U.S.C. 21 et seq., allows the location, use, and patenting of mining claims on sites on public domain lands of the United States. Amendments established a policy of fostering development of economically stable mining and minerals industries, their orderly and economic development, and studying methods for disposal of waste and reclamation.
27. *Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations)*, (49 FR 7629), requires that each Federal agency consider the impacts of its programs on minority populations and low income populations.
28. *Executive Order 13007 of 1996* (Indian Sacred Sites), (61FR104), explicitly does not create any new right for Indian tribes, but does requires Federal agencies to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions to:
    a. Accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners;
    b. Avoid adversely affecting the physical integrity of such sacred sites; and
    c. Maintain the confidentiality of sacred sites.
29. *Executive Order 13175 of 2000 (Consultation and Coordination with Indian Tribal Governments)* provides, in part, that each Federal agency shall establish regular and meaningful consultation and collaboration with Indian tribal governments in the development of regulatory practices on Federal matters that significantly or uniquely affect their communities.
30. *Executive Order 13112 (Invasive Species)* provides that no Federal agency shall authorize, fund or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk or harm will be taken in conjunction with the actions.
31. *Secretarial Order 3206 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act)* requires DOI agencies to consult with Indian Tribes when agency actions to protect a listed species, as a result of compliance with ESA, affect or may affect Indian lands, tribal trust resources, or the exercise of American Indian tribal rights.
32. The *Federal Cave Resources Protection Act of 1988*, 16 USC 4301, requires federal agencies to identify, protect and maintain significant caves. The locations of such caves may be kept confidential. Protection is afforded not only to the geologic structure, but also the associated decorations, inhabitants (including animals and plants, artifacts, and water resources.
33. The *BLM's Interim Cave Management Policy* (Instruction Memorandum No. OR-95-021) provides for the following: Where known or potential adverse impacts from human use to threatened, endangered, and/or sensitive plants or animals ... are present ... the responsible authorized officer shall act to protect these resources.
34. *Resource Conservation and Recovery Act* (RCRA, Pub. L. 94-580), as amended. In 1976 RCRA established a system for managing non-hazardous and hazardous solid wastes in an environmentally sound manner. Specifically, it provides for the management of hazardous wastes from the point of origin to the point of final disposal (i.e., "cradle to grave"). RCRA also promotes resource recovery and waste minimization.
35. *Executive Order 13212*. "It is the policy of this Administration that executive departments and agencies (agencies) shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy."
36. The *Public Rangelands Improvement Act*, 43 U.S.C. 1901, provides that the public rangelands be managed so that they become as productive as feasible in accordance with management objectives and the land use planning process established pursuant to 43 U.S.C. 1712.
37. *Taylor Grazing Act*, 43 USC 315 was passed in 1934 to stop injury to the public grazing lands by preventing overgrazing and soil deterioration, to provide for their orderly use, improvement, and development,

to stabilize the livestock industry dependant upon the public range, and for other purposes. The Act authorizes the Secretary of the Interior to establish or add to grazing districts in vacant unappropriated and unreserved lands from any part of the public domain which are chiefly valuable for grazing and raising forage crops.

38. *Executive Order # 13443 "Facilitation of Hunting Heritage and Wildlife Conservation"* (8/17/07) directs Federal agencies that have programs and activities that have a measurable effect on public land management, outdoor recreation, and wildlife management to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat.
39. The Bureau of Land Management, *National Sage-Grouse Habitat Conservation Strategy* (2004) sets broad goals and specific actions to meet the goals for protecting sage-grouse and sage-grouse habitat.
40. The 1995 *Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California* (USDA-FS and USDI-BLM 1995), commonly referred to as PACFISH, provides guidance for managing and monitoring grazing lands adjacent to streams where anadromous fish are present or potentially present.
41. *Oregon Washington Special Status Species Policy*, IM No. OR-91-57, issued 11/5/90, as amended by IM No. OR-91-57 change 1, issued 8/5/91, provides protection for plants which are not federally listed, proposed or candidates, and assigns these species to one of three lists: Bureau Sensitive, Assessment, and Tracking. The policy relies in part on the State of Oregon rules, which includes the Oregon Endangered Species Act, and lists prepared by the Oregon Natural Heritage Data Base.
42. The *Migratory Bird Conservation Act of 1929*, as amended (16 U.S.C. 715) and pertinent treaties, direct BLM to provide for habitat protection and enhancement of protected migratory birds. Subsequent science has documented the reliance of wildlife on riparian vegetation and aquatic habitat that will be used as indicators in the John Day Basin to determine whether desired conditions for wildlife are being met.
43. *Executive Order 13352 of 2004 (Facilitation of Cooperative Conservation)*, directs Federal agencies to implement laws relating to the environment and natural resources in a manner that promotes cooperative conservation, with an emphasis on appropriate inclusion of local participation in Federal decision-making, in accordance with their respective agency missions, policies, and regulations.
44. *Instruction Memorandum No. 2006-114 (BLM participation and support of development of State Comprehensive Wildlife Strategy development)*, directs the Bureau of Land Management (BLM) State Directors, District and Field Managers to consider State Wildlife Action Plans (also known as Comprehensive Wildlife Conservation Strategies) in land use and conservation planning on BLM-administered lands.
45. *Wild Horse and Burro Act of 1971*, as amended, gave responsibility for the management and protection of these animals to the U.S. Department of the Interior to be administered by the BLM and to the Department of Agriculture to be administered by the Forest Service.
46. *Executive Order 11644* (37 FR 2877), on February 8, 1972, provided that OHV use will be controlled and managed to protect resource values, promote public safety and minimize conflicts with uses of public lands. This executive order directed federal agencies to designate specific areas and trails on public lands where OHV use may be permitted and areas where OHV use may not be permitted.
47. On May 24, 1977, President Carter amended this order with *Executive Order 11989*. This executive order further defined OHV, administrative use exemptions, and directed agencies to immediately close areas and trails whenever the agency determines that the use of OHV will cause or is causing considerable adverse effects on the soil, wildlife, and wildlife habitat, cultural or historic resources (42 USC 4321).
48. The Bureau of Land Management's *National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands* (2001) provides agency guidance and offers recommendations for future actions to improve motorized vehicle management.
49. The *Federal Noxious Weed Act of 1974*, as amended (7 U.S.C. 2814) provides for the designation of a lead office and a person trained in the management of undesirable plants; establishment and funding of an undesirable plant management program; completion and implementation of cooperative agreements with State agencies; and establishment of integrated management systems to control undesirable plant species.
50. The *Carlson-Foley Act* (PL 90-583 codified in 43 USC 1241) establishes legal guidance and responsibility for the management of weeds on federal lands. This law authorizes federal agencies to allow states to take weed control measures on federal lands.

51. *Oregon Land Exchange Act of 2000,* as described in Chapter 1, requires that "lands acquired...within the North Fork of the John Day subwatershed be managed primarily for the protection of native fish and wildlife habitat, and for public recreation but that other authorized uses may be allowed if, through a land use planning process, it is determined that such uses are consistent with, and do not diminish the primary management purposes."
52. *BLM planning regulations* (43 CFR 1610.4-3 and 1610.4-6) require that resource management plans consider social, economic, and institutional information.
53. *Federal Wildland Fire Management Policy 2001* provides strategic direction for a broad range of fire management related activities.
54. *43 CFR 4100* Regulations provide uniform guidance for administration of grazing on the public lands exclusive of Alaska.
55. The *BLM Handbook 4100, Grazing Administration, Oregon/Washington Supplement Release 4-107;* provides guidance for adjusting livestock grazing during periods of drought conditions.
56. *Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington* (USDI-BLM, 1997) provides direction to promote healthy sustainable rangeland ecosystems, restore and improve public rangelands and to provide sustainable resources to support the livestock industry.
57. *Executive Order No. 13186* directs the BLM to protect, restore, enhance and manage habitat of migratory birds and prevent the loss or degradation of remaining habitats on BLM managed lands.
58. The *Soil and Water Resources Conservation Act of 1977* (16 U.S.C. 2001) provides for conservation, protection and enhancement of soil, water, and related resources.
59. The *Floodplains and Wetlands Executive Orders 11990 and 11988* require BLM to avoid adverse impacts to floodplains and wetlands.
60. The *Migratory Bird Treaty Act* (16 U.S.C. §§ 703-712, July 3, 1918, as last amended in 1989) directs federal agencies to substantially address source habitats and species of focus.
61. *Instruction Memorandum No. 2008-050* provides interim guidance to enhance coordination and communication toward meeting the Bureau of Land Management's (BLM) responsibilities under the Migratory Bird Treaty Act (MBTA) and the Executive Order (EO) 13186. This interim management guidance establishes a consistent approach for addressing migratory bird populations and habitats when adopting, revising, or amending land use plans and when making project level implementation decisions until a national Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service (FWS) is established.
62. *BLM manual sections 8270 and 8270-1* provide direction for management of paleontological resources.
63. The *BLM OR/WA strategy document for managing vertebrate fossil resources* (Martin 1995).
64. *Agreement No. IA9325-8-0001,* as amended, for co-management of fossil resources with the National Park Service (NPS), between John Day Fossil Beds National Monument and Bureau of Land Management Prineville District, Burns District, Vale District, Lakeview District).
65. *BLM Manual Series 8100, Cultural Resource Management.*
66. *Memorandums of Understanding (MOU)* between the Oregon/Washington BLM and a) the Confederated Tribes of the Umatilla Indian Reservation, b) the Confederated Tribes of the Warm Springs Reservation of Oregon, and c) the Burns Paiute Tribe address the appropriate level and timing for consultation, as well as other coordination issues between these tribes and the BLM.
67. *ORS 390.835(2)* sets rules for dredging in State Scenic Waterways. This law requires a permit for any dredging, regardless of the amount, from the Oregon Division of State Lands (ODSL). In other waters, a permit is required only for movement of more than 50 cubic yards. Also, suction dredging in SSWs may not: (a) divert a waterway or obstruct fish passage; (b) include nozzling outside the wet perimeter; (c) move boulders or logs from the wet perimeter, except by hand; (d) disturb any woody plants; (e) excavate from the streambank; (f) fail to level pits and furrows outside the main channel; (g) occur without a ODEQ discharge permit; (h) occur on federal lands without permission; (i) impede boating; (j) operate within 500 feet of a home or campground between 6 pm and 8 am; or, (k) operate within posted swimming areas.

68. *43 CFR 3809* regulates mineral exploration and development on public land is to prevent unnecessary and undue land degradation.

69. BLM management is largely guided by the DOI Strategic Plan (2007 to 2012). Mission Goal Number One is to "Protect the nation's natural, cultural, and heritage resources to "improve health of watersheds, landscapes, and marine resources that are DOI managed or influenced, consistent with obligations and state law regarding the allocation and use of water." The first performance goal to measure success toward achieving this outcome is "to achieve desired conditions on 90% of DOI managed stream/ shoreline miles where condition is known and as specified in management plans by 2012." This is measured annually by accounting for a the miles of stream/shoreline achieving PFC.

70. Those waters and substrates necessary for salmonid fish spawning, breeding, feeding, or growth comprise Essential Fish Habitat (EFH). All streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmonids in the plan area are designated EFH for affected salmonid stocks with management plans. The exceptions are habitats above Izee Falls and headwater areas where flow limits salmonid distribution (Magnuson-Stevens Act amended, 1996).

71. 43 CFR 8340 regulates Off-Road Vehicles. Subpart 8340 (Off-Road Vehicles) defines OHV and Open, Limited and Closed areas and defines spark arrestor. Subpart 8341 (Conditions of Use) defines regulations governing use of OHVs on public lands and lists special rules restricting OHV use and its effects on resource values. Subpart 8342 (Designation of Areas and Trails) lists area and trail designation criteria, procedures, and changes. Subpart 8343 (Vehicle Operations) lists vehicle operation standards, including noise restrictions, and permit requirements for certain types of OHV use.

Appendix B: Best Management Practices

Introduction

Best management practices (BMP) are those land and resource management techniques designed to maximize beneficial results and minimize negative impacts of management actions. The BMPs described in this appendix are designed to assist in achieving the objectives outlined in Chapter 2 Alternatives. Some of the BMPs listed below come from laws or regulations, and are thus mandatory. Others are policies or guidelines based on current technology and science, and will therefore change as we find new ways to accomplish actions, and learn new information about effects of actions.

Interdisciplinary site-specific analysis may be necessary to determine which management practices would be necessary to meet specific objectives. Modifications of BMPs may be necessary, on a site-specific basis, to minimize the potential for negative impacts, and to reflect changes in BLM regulations, policy, direction, or new scientific information. In order to meet resource objectives, an interdisciplinary team may add new BMPs or modify existing BMPs when evaluating site specific management actions

The BMPs below are sorted by activity type (roads, timber). There is some repetition of BMPs between sections. This appendix does not provide an exhaustive list of BMPs; for example, we have not re-printed guidance from ICBEMP. The BMPs listed below may be updated through annual plan maintenance as new information becomes available. These guidelines apply, where appropriate, to all use authorizations, including BLM-initiated projects.

General BMPs

Any project or soil disturbing activity

S1, S3, AQ9, AQ3, AQ7, L1, AQ6	Retain or promote infiltration, permeability, and soil moisture storage.
S1, S3, AQ5, AQ3, AQ6, L1	Minimize soil loss and sediment delivery that is in excess of natural disturbance processes.
S1, S3, L1, W4, V1	Maintain or restore nutrient cycling and energy flow.
V2	Conduct botanical inventory for the presence/absence of special status plants prior to all project implementation. Inventory would be conducted during the season(s) appropriate for species identification, allowing for occupied plant habitat to be identified, flagged and protected as needed.
V2	Surface-disturbing activities (i.e. control lines, access routes, helipads, etc.) would be located outside special status plant habitat.
V2	Monitor special status plants and their habitat as needed, based on: threats to site; whether site is within special management area or other designation; the legal status of species; and potential effects of a management action.
V2	As time allows, conduct purposeful inventory (i.e., not related to project clearance) for special status plants in likely habitat that has not been previously surveyed.
V1, V4, AQ7, A10, S3	All contractors and land-use operators moving surface-disturbing equipment in or out of weed infested areas should clean their equipment before and after use on public land.
V1, V4, AQ7, A10, L1, S3	Control weeds annually in areas frequently disturbed such as gravel pits, recreation sites, road sides, livestock concentration areas.
V1, V4, AQ7, A10, L1, S3	Consider livestock quarantine, removal, or timing limitations in weed infested areas.
V1, V4, AQ7, A10, AG1, S3	All seed, hay, straw, mulch, or other vegetation material transported and used on public land weed-free zones for site stability, rehabilitation or project facilitation should be certified-by a qualified Federal, State, or county officer as free of noxious weeds and noxious weed-seed. All baled feed, pelletized feed and grain transported into weed-free zones and used to-feed livestock should also be certified as free of noxious weed seed.
V1, V4, AQ7, A10, S3, W8	It is recommended that all vehicles, including off-road and all-terrain, traveling in or out of weed infested areas should clean their equipment before and after use on public land.
V1, V4, AQ7, A10, W2, WN1	In crucial wildlife habitats major construction and maintenance work will be scheduled to avoid or minimize disturbance to wildlife. Areas disturbed during project construction will be reseeded with a mixture of grasses, forbs and shrubs to meet site specific needs or habitat requirements.
W1, FU2	Vegetation manipulation and revegetation projects in crucial wildlife areas will be designed to create a vegetation mosaic.
AQ13, AQ9, AQ6, W7, W8	Maintain adequate untreated peripheral zones around important moist-sites (i.e., wet sedge meadows, springs, riparian zones).

General BMPS - any project or soil disturbing activity (cont.)

W5	Maintain adequate thermal and security cover on deer and elk habitat, particularly within timber stands adjacent to primary winter foraging areas.
VR1, WSR1, AC7, AC8, AC9, AC13	Consider the effects on visual values (complete VRM contrast rating) from all new surface disturbing activities.
AQ9, AQ5, V5, AQ6, S3, W8	Locate ground disturbing activities and facilities away from hydric soils and wetlands. Ground altering activities should not degrade conditions beyond which 5 or more years are necessary to recover soil compaction and restore the local native vegetation and sediment regime. Five years is the interval in which TMDLs are updated.
AQ9, AQ5, V5, AQ6, S3, W5	Prohibit actions (except to the minimum extent determined by ID team) that compact hydric or wetland soils, reduce site potential vegetation and thermal cover, and alter hydrology (e.g., infiltration). Use plantings and manage for obligate, facultative, or wetland species around degraded riparian/wetland sites.
W5	In areas of important big game habitat, consultation with the wildlife biologist will be necessary to reduce impacts on wildlife, particularly in areas such as ridgelines, saddles, and upper drainage heads.
W5, W4	Consult with ODFW prior to undertaking major construction, and/or surface disturbing activities in high value wildlife habitats.
VR1, W1, FU1	Design sagebrush control projects using irregular patterns and untreated patches to provide for optimum edge effect for visual and wildlife considerations. Coordinate layout and designs are coordinated with the Oregon Department of Fish and Wildlife.
W4, W5, W8, AQ3	Avoid major activities in ridges, saddles, and upper drainage heads.
AQ3, AQ13, AQ9, AQ10, W4, W8, S3	Retain vegetation on cut slopes unless it poses a safety hazard or restrict maintenance activities. Roadside brushing of vegetation should be done in a way that prevents disturbance to root systems and visual intrusions (such as avoid using excavators for brushing).
S3, W4, W5, AQ6	Abandon and rehabilitate roads no longer needed
S3, W4, W5, AQ7	Disturbance from rights-of-way and/or disturbance in utility corridors use areas adjoining or adjacent to previously disturbed areas, rather than traverse undisturbed communities.
AC1, WSR1, S1, S3, VR1	Cutting areas would be shaped and designed to blend as closely as possible with natural terrain and landscape minimizing the effect on total forest vistas. Consideration will be given to future harvesting, impacts of road construction and other relevant factors.
W4, V1	In forest and woodland management activities, retain a minimum of 10% of live trees per acre including dominants in regeneration harvest units, unless this conflicts with other wildlife or resource management objectives. The density, composition, condition, size classes and spatial distribution of the retained trees varies according to management objectives, stand and site conditions, and other constraints. These trees are not to be counted toward future snag recruitment.
S3, AQ1, AQ3, AQ5, AQ6, T4-6	Install waterbars and seed all constructed fire lines with native or adapted nonnative species as appropriate.
W1, L1, L3	Range developments will be designed to achieve both wildlife and livestock grazing management objectives.
AQ8, W8, WSR1	As springs are developed, fence to protect water source and areas where significant overflow from troughs occurs to protect riparian vegetation.

General BMPS - any project or soil disturbing activity (cont.)

W1, W4, W7, VR1, VR3	Sagebrush control projects are designed using irregular patterns and untreated patches to provide for optimum edge effect for visual and wildlife considerations.
AQ11, W8	Locate fences so that they do not confine or concentrate livestock near the riparian zone.
W4, W5, W7, W8	Do not approve human disturbance in excess of base levels that were occurring in 2001 (e.g. snowmobile, prescribed burning, automobile traffic, camping, hunting, firearm use, low level aircraft operation below 2,500 feet, recreational events) within ¼ mile non line-of-sight or ½ mile line-of-sight (1.0 mile for blasting) of known bald eagle nests between January 1 and August 31. This condition may be waived in a particular year if nesting or reproductive success surveys reveal that bald eagles are non-nesting or that no young are present that year. Waivers are valid only until January 1 of the following year.
W4, W5, W7, W8	Project activities that have potential to disturb bald eagle winter roosts, shall be restricted within 400 m of the roosting area from November 1 to April 30.
W4, W5, W7, W8	Where bald eagle nests are blown from trees during storms or are otherwise destroyed by the elements, continue to protect the site in the absence of the nest for up to three (3) complete breeding seasons.
W4, W5, W7, W8	In bald eagle habitat, a biological evaluation will be conducted or reviewed by a journey-level biologist to determine if the use of the area by eagles is incidental or essential.
W4, W5, W7, W8	If it is determined to be essential bald eagle habitat, protect it from adverse modification through curtailment of conflicting activities, modification of activities, seasonal restriction of activities, or avoidance of the area.
W4, W5, W7, W8	In bald eagle habitat, Predator and rodent control using baited traps and/or poisons should not take place within 1 mile of an active bald eagle nest or ¼ mile of a known roost.
W4, W5, W7, W8	In bald eagle management areas and essential habitat, fuel wood cutting and gathering will not be permitted, unless a site specific review determines that it is necessary to promote desired future habitat conditions for bald eagle and other desired wildlife species. If fuel wood cutting is deemed necessary to promote habitat conditions, then the following protective measures will be implemented: a) sign cut unit boundary prior to the fuel wood cutting season; b) down or standing fuel wood will not be cut and gathered within ¼ mile of the nest between January 1 and August 31 if a bald eagle nest is active; down woody material may be gathered outside of the nesting season; c) no standing dead tree greater than 16 inches dbh shall be cut or removed within 500 meters (i.e., 0.31 mile) of the nest at any time of the year; and d) no standing dead trees greater than 16 inches dbh shall be cut, unless it meets the long-term management objectives.
W4, W5, W7, W8	In bald eagle management areas and essential habitat, prescribed fire managers need to use smoke management forecasts in order to minimize smoke entering into suitable habitat and to ensure that dissipation would be adequate.
W4, W5, W7, W8	In bald eagle management areas and essential habitat, predator and rodent control using baited traps and/or poisons will not take place.
W4, W5, W7, W8	In bald eagle management areas and essential habitat, all vegetation manipulations need to promote the development of large trees capable of supporting future bald eagle nesting, perching, and roosting regardless of other land allocations. While some timber harvest is allowable, it is only for the purpose of initiating long-term stand management to achieve bald eagle habitat objectives. Precommercial thinning is allowable to promote the development of large trees.
W4, W5, W7, W8	In bald eagle management areas and essential habitat, all snags that are eagle perches within 500 meters (1650 feet) of nests or roosts should be preserved. In addition, all snags utilized for roosting or foraging within nesting territories or communal roosts should be protected.

General BMPS - any project or soil disturbing activity (cont.)

W4, W5, W7, W8	In bald eagle management areas and essential habitat, development of new recreation facilities or expansion of existing facilities that will increase the amount, type, or area of use, such as campgrounds and resorts, is not compatible in these areas and will not be authorized.
W4, W5, W7, W8	In bald eagle management areas and essential habitat, protect all existing nesting, roosting, and perch trees. Generally, these are any live trees (Douglas-fir, ponderosa pine, etc.) or snags over 21" in diameter at breast height.
W4, W5, W7, W8	In the 0.25 to 0.75 mile circle around active peregrine nests, seasonal restriction on human entry and activities are strictly followed.
W4, W5, W7, W8	In the 0.25 to 0.75 air mile circle around active peregrine nests, human activity (foot, vehicle, or aerial entry) is prohibited during the nest season, except for peregrine falcon monitoring and related activities, law enforcement, or to preserve human life in emergencies.
W4, W5, W7, W8	In the 0.25 to 0.75 air mile circle around active peregrine nests, no new human habitat alteration activity is planned (e.g. road or trail building, harvest, construction, recreation, ...)
W4, W5, W7, W8	In the 0.5 to 2 air mile circle around active peregrine nests, most recreation related activities are permitted during the nesting season. Exceptions may include hand gliding, trail blasting, large group gatherings.
W4, W5, W7, W8	In the 0.5 to 2 air mile circle around active peregrine nests, harvest activity and habitat manipulation are to be designed to retain structure and function of the ecosystem in the immediate area of the nest cliff and surrounding habitat to augment production of prey for peregrine falcons. Silvicultural practices will use the best available information for protection and augmentation of avian prey populations, and will consider and create action alternative which will benefit and support local biological diversity.
W4, W5, W7, W8	In the circle of 3 air miles from active peregrine nests, proposed human-generated activities are scrutinized to determine potential effects to peregrines.
W4, W5, W7, W8	In the circle of 3 air miles from active peregrine nests, fire suppression activities will closely follow draft or final site specific management plans.
W4, W5, W7, W8	Aircraft (special use permit or Agency contacted/owned) are permitted outside of 15,00 feet AGL (above ground level) "bubble" in the 1 – 2 mile zone from the peregrine nest except during the restricted period. Further, most aerial activity is permitted outside of 2 mile zone during the restriction period.
W4, W5, W7, W8	Retention of large woody material, and protection/ creation of the snag component (all conditions) is a standard practice to enhance and retain peregrine prey populations. The levels of protection/retention within units are generally for the maximum amount achievable, per site condition for large woody material and snags.
W4, W5, W7, W8	In peregrine zones, retain hardwood components in clumps to aid avian productivity.
W4, W5, W7, W8	Gate or otherwise close excess roads within 2 miles of the peregrine nest.
W4, W5, W7, W8, AQ9, AQ10	Do not fragment or convert wetland habitat to upland habitat through management activities including, but not limited to, water diversions, road construction, maintenance, or recreational facilities expansion. Where possible restore wetlands for Columbia spotted frog
W4, W5, W7, W8, AQ9, AQ10	Do not degrade wetland habitat or water quality for Columbia spotted frog.
W4, W5, W7, W8, AQ9, AQ10	In channel, lake, or shoreline digging would be for restoration only, and protect Columbia spotted frog.

General BMPS - any project or soil disturbing activity (cont.)

W4, W5, W7, W8, AQ9, AQ10	Do not allow ground-based machinery use within Riparian Management Areas or within a water body that increases soil compaction or removes vegetation that exposes soil to additional erosion processes. Within designated campgrounds (within Riparian Management Areas), machinery will not leave designated roads or parking areas and will protect Columbia spotted frog.
W4, W5, W7, W8, AQ9, AQ10	Do not locate landings within Riparian Management Areas with Columbia spotted frog habitat
W4, W5, W7, W8, AQ9, AQ10	Do not construct fire lines within Riparian Management Areas with Columbia spotted frog habitat.
W4, W5, W7, W8, AQ9, AQ10	New temporary roads will be located outside of zones delivering sediment to Columbia spotted frog habitat (as determined by soil type, ground vegetation, and slope), will provide relief drainage, and will be hydrologically closed.
W4, W5, W7, W8, AQ9, AQ10	Commercial road use, including hauling/blading, will not contribute to siltation off the road into Columbia spotted frog habitat.
W4, W5, W7, W8, AQ9, AQ10	Snow plowing will allow water/runoff to drain off road with filtration (vegetation buffer) before reaching creeks with Columbia spotted frog.
W4, W5, W7, W8, AQ9, AQ10	In Riparian Management Areas with Columbia spotted frogs, culvert replacements will decrease stream sediment input both during and after construction activities (e.g., adequate road ditch relief, cross drains, wing wall rip-rapping).
W4, W5, W7, W8, AQ9, AQ10	Do not allow in-channel, in lake, or shoreline digging where removal of substrate occurs or significant disruption where Columbia spotted frog spawning or rearing habitat occurs (e.g., in-stream gravel mining or dredging).
W4, W5, W7, W8, AQ9, AQ10	Do not allow permitted activities to artificially raise or lower natural water levels for systems with Columbia spotted frog habitat.
W4, W5, W7, W8, AQ9, AQ10	Activities will not reduce the amount of vegetative cover to the point of creating streambank instability. For Columbia spotted frogs, the minimum threshold is 90% stable streambanks.
W4, W5, W7, W8, AQ9, AQ10	Changes in hydrology of a stream, spring, lake, or wetland should be for restoration purposes only.
W4, W5, W7, W8, AQ9, AQ10	In reservoirs which can provide Columbia spotted frog habitat, allow maintenance or development of shallow water habitat with emergent vegetation through July to provide egg laying and development.
W4, W5, W7, W8, AQ9, AQ10	When removing or modifying stream barriers to allow for fish passage, do not risk the introduction of non-native species.
W4, W5, W7, W8, AQ9, AQ10	Limit activities within the Riparian Management Areas to those that have either a neutral or beneficial effect on aquatic objectives. Timing of those activities will be outside Columbia spotted frog egg laying/hatching for that area. If not known, restrict activities from March 1 to May 31.
W4, W5, W7, W8, AQ9, AQ10	Habitat connectivity will be maintained through properly functioning streams, marsh, in stream, and floodplain vegetation. Restore native sedges, rushes, and willows and protect Columbia Spotted Frog.
W4, W5, W7, W8, AQ9, AQ10	Use of pesticides, herbicides, and similar potential contaminants are prohibited in and immediately adjacent to wetland habitat. Applications of these chemicals should be conservative when estimating drift to avoid any contamination and protect Columbia spotted frog.

General BMPS - any project or soil disturbing activity (cont.)

W4, W5, W7, W8, AQ9, AQ10	Survey for the presence of nesting goshawks in suitable goshawk habitat for all major management actions (e.g., timber sales) prior to the implementation of management activities. Implementation is the date a Record of Decision is signed. Two years of surveys are recommended for all new timber sales.
W4, W5, W7, W8	For goshawk, ensure that the most recent version of the E-4 Special Provision issued May 10, 1996, in Instruction Memorandum No. OR-96-78 is included in all new sale contracts.
W4, W5, W7, W8	Active and historically used (i.e., alternate nest sites used in the past five years) nest sites and the surrounding 400-acre post-fledgling family area (PFFA) shall be afforded the following management recommendations:
W4, W5, W7, W8	At a minimum, 30 acres of the most suitable goshawk nesting habitat surrounding the nest site shall be deferred from harvest. The 30 acres should include known alternate nest sites and plucking posts and should be blocky or circular in shape. Biologists should use the best available professional knowledge of the birds' habitat use and of the available habitat. If operating under an existing management plan that specifies greater protection, then the more stringent management prescriptions shall prevail.
W4, W5, W7, W8	A 400-acre PFFA shall be designated around each active goshawk nest site and be comprised of the best available habitat. While harvesting activities can occur, a minimum of sixty percent (if it currently exists) of the PFFA shall be managed as mature and old growth/old forest seral stages (approximately 80 years of age and older and hereafter referred to as late successional). Harvest of late-successional tree/stands may occur if based upon a risk assessment and a determination of imminent threat to the viability of the habitat. An example would be the creation of a fire break.
W4, W5, W7, W8	Within the goshawk PFFA, forest health projects and timber sale activities should be designed to promote retention of late-successional stands where they exist. This may include the thinning of over-dense late seral stage stands (approximately 40-80 years) which may or may not have a late-successional component. In early and late seral stands, activities will be designed to promote forest health and the creation of late-successional conditions.
AQ3, AQ5, AQ14	Include Pollution and Erosion Control Plans (PECPP) and Spill Prevention Control and Containment Plans (SPCCP) in contracts, agreements and project plans when activity proposed to occur within stream channels or RMAs or may result in: mobilization of fine sediment, pesticide/herbicide use, short-term riparian disturbance, or harassment of ESA-listed aquatic species. PECPs will include provisions for minimizing site preparation impacts, minimize heavy equipment impacts, and site restoration.
AQ5, AQ10, AQ12, AQ13	PECPs will include provisions for minimizing site preparation impacts, minimize heavy equipment impacts, and site restoration.
AQ5, AQ10, AQ12, AQ13	"SPCCP will: describe provisions to prevent or reduce impacts from potential spills (fuel, hydraulic fluid, etc), describe the hazardous materials that will be used, including inventory, storage, handling procedures; a description of quick response containment supplies that will be available on the site (e.g., a silt fence, straw bales, and an oil-absorbing, floating boom whenever surface water is present)."
AQ6, W4, W8, AQ3, AQ13	Establish staging areas (used for construction equipment storage, vehicle storage, fueling, servicing, hazardous material storage, etc.) beyond the 100-year floodplain in a location and manner that will preclude erosion into or contamination of the stream or floodplain and preferably outside of RMAs.
AQ6, W4, W8, AQ3, AQ13	Materials used for implementation of aquatic restoration categories (e.g., large wood, boulders, fencing material, etc.) may be staged within the 100-year floodplain for short durations.

General BMPS - any project or soil disturbing activity (cont.)

AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Prior to construction or use of heavy equipment in and around Riparian Management Areas, flag critical riparian vegetation areas, wetlands, and other sensitive sites to prevent ground disturbance in these areas.
AQ5, AQ6	Place sediment barriers prior to construction around sites where significant levels of erosion may enter the stream directly or through road ditches. Maintain barriers throughout construction.
AQ6. AQ11	Fell hazard trees within riparian areas when they pose a safety risk. If possible, fell trees towards the stream. Keep felled trees on site when needed to meet coarse woody debris objectives.
AQ1, W1, T1, S3	The size and capability of heavy equipment will be commensurate with the project.
AQ5, AQ6, AQ12, AQ14	All equipment used instream shall be cleaned and leaks repaired prior to entering the project area. Remove external oil and grease, along with dirt and mud prior to construction. Thereafter, inspect equipment daily for leaks or accumulations of grease, and fix any identified problems before entering streams or areas that drain directly to streams or wetlands. During instream heavy equipment work, consider deploying an oil-absorbing floating boom downstream. Equipment used for instream or riparian work shall be fueled and serviced in an established staging area outside of riparian zone. When not in use, vehicles shall be stored in the staging area.
AQ6, AQ12, AQ13	Stream crossings shall not increase risks of channel re-routing at low and high water
AQ6, AQ12, AQ13, AQ3, W8, W4	Avoid placing temporary and permanent road crossings at potential listed fish spawning areas when possible.
AQ6, W5	Utilize existing roadways or travel paths and limit the number of new access paths.
AQ6, AQ14, WSR1	Instream operations must cease under high flow conditions that inundate the project area, except for efforts to avoid or minimize resource damage and for eminent safety concerns.
AQ5, AQ10, AQ12, AQ13	Minimize time in which heavy equipment is in stream channels, riparian areas, and wetlands. Operate heavy equipment in streams only when ID teams believe that such actions are the only reasonable alternative for implementation, or would result in less sediment in the stream channel or damage (short- or long-term) to the overall aquatic and riparian ecosystem relative to other alternatives.
AQ1, W1, T1, S3	Upon project completion, remove project related waste.
AQ10, V1, V5, W4, AC10, N1, W7, W8	During restoration of disturbed sites, use the guidance from BLM Instruction Memorandum No. OR-2001-014, Policy on the Use of Native Species Plant Material.
S3, AQ6, AQ7, V4, L1, W7	Plan rehabilitation of all disturbed riparian areas in a manner that results in similar or better than pre-work conditions through spreading of stockpiled materials, seeding, and/or planting. In riparian areas, planting shall be completed no later than spring planting season of the year following end of disturbance. Short-term stabilization measures will be maintained until permanent erosion control measures are effective. Stabilization measures will be instigated within three days of construction completion or disturbance.
W4, W5, W7, W8, AQ9, AQ10, S3	When necessary, loosen compacted areas, such as access roads, stream crossings, landings staging, and stockpile areas at project completion.
S3	Retain vegetation on cut slopes unless it poses a safety hazard or restrict maintenance activities.
AQ4, AQ6, AQ12	Projects will not significantly restrict the channel migration zone and ability of the channel to form and maintain habitat.
R1, W1	In areas open to cross country vehicle travel, allow no net increase in miles of fence.

Fire and Fuels

Wildfire use and prescribed burning

V1, W4, W5, W6, W7	Maintain connectivity of sagebrush habitat.
V1, V4, S3	Use mechanical means, rather than fire, where the risk of exacerbating fire cycles associated with invasive species (such as cheatgrass) is high.
W4, V1	Create small-scale patch patterns (i.e. burrowing animals) and larger scale patches (>1,000 acres).
W4, V1	In forest and juniper woodland Bio-physical Settings, management activities must retain a minimum of 10% of live trees per acre including dominants. These trees are not to be counted toward future snag recruitment.
V4, W4, S3, WSR1	Provide mitigation, by reducing, restoring or compensating for important special habitats that are altered by management actions.
W8, W4	Maintain old growth characteristics wherever they are present.
WSR1, V4	Reseed areas disturbed during project activities with a mix of grasses, forbs, and shrubs to meet site-specific needs or habitat requirements (see Chapter 2 Vegetation section for more details).
AQ1, AQ3, S3	Choose between suppression and burning by balancing effects of suppression activities with the effects of burning on achievement of objectives.
All	Limit operation of mechanized equipment to times when soils are less susceptible to detrimental disturbance, unless soils are frozen or covered with 18 inches or more of snow.
AQ3	Do not use heavy equipment (such as ground based harvest) on slopes greater than 35%.
S3, S1, AQ1, AQ3, AQ6	Ensure that removal of vegetation or ground disturbing activities do not exacerbate headcutting. Avoid activities that would remove more than 50% of the watershed cover and exacerbate headcutting by increasing runoff. If more than 50% of the watershed cover is removed, apply watershed mitigations to attenuate peak flows associated with increased runoff. Mitigation measures such as buffers, hydro-seeding, and wattles must be applied prior to fall precipitation (usually in October).
AQ6, AQ12, AQ13, V4	Prohibit activities that would degrade the sediment regime of perennial, perennial interrupted or intermittent stream channels. Activities may be allowed if the long term intent of an activity is to restore stream physical function (e.g. juniper removal, thinning conifer encroachment, etc). The combination of BLM actions to restore upland watershed conditions and other landowner activities shall not risk (1% or 100 year event) degrading sediment and flow regimes longer than 3 years. Limit treatment of riparian areas within each sixth field sub watershed, to less than 10% of the total riparian vegetation within any one year period. As an exception, low intensity burns backing into riparian areas may not exceed 50% of riparian area in 6th field watershed.
AQ6, AQ12, AQ13, V5, VR1, WSR1, F3	Prohibit ignition within riparian management areas, and locate ignition lines away from large open meadows, unless prescribed to meet aquatic objectives.

Fire and Fuels - wildfire use and prescribed burning (cont.)

AQ6, AQ3, WSR1, S3	Over the course of two years, forest cover restoration shall not exceed an 80% change in areas of less than 18"-15" annual precipitation. This 80% change applies to cumulative activities across all ownerships of a watershed (HUC 5). Phased treatments are preferred. Achieve landscape appropriate peak flows during juniper watershed treatments by lopping and scattering of limbs or similar material
S3, V4, W8	Prescribed fire must achieve down wood volumes referenced in Down Wood Table of Vegetation Section.
AQ6, AQ7	Keep high intensity wildfire, concentration burns and broadcast burns at least 100 feet away from riparian management areas unless prescribed to meet aquatic objectives.
AQ11, W8	Avoid ignition of large woody material that is touching the high water mark of a waterbody or that may be affected by high flows.
AQ3, AQ13, AQ9, AQ6, W8	Prohibit delivery of foam or additives to waterbodies, floodplains, or wetlands.
AQ3, AQ13, AQ9, AQ7	Store and dispose of ignition devices/materials (e.g., flares, plastic spheres, etc.) outside riparian management areas.
AQ3, AQ13, AQ9, AQ8	Maintain and refuel equipment (e.g., drip torches, chainsaws, and portable pumps) a minimum of 100 feet from waterbodies, floodplains, and wetlands.
AQ3, AQ13, AQ9, AQ9, W8	Exclude ground-based equipment within riparian management areas.
AQ3, AQ13, AQ9, AQ10, W8	Limit hand constructed fire lines inside riparian management areas and prohibit machine constructed fire lines in riparian management areas. Where hand constructed fire lines are necessary in riparian management areas, angle the approach rather than have it perpendicular to the riparian management area.
AQ9, AQ13, W4, W8	Retain 20% of the upland perimeter of lentic areas in vegetative species and structure needed for hiding cover, life cycle completion, and corridors of site riparian-dependent biotic community. This may translate into leaving areas untreated for fuels or other activities. The final delineation will be made by an ID team.
AQ3, AQ13, AQ9, AQ10, W4, W8	Avoid brushing along stream channels and floodplains. Brushing may be unavoidable if it is necessary for human safety or to avoid threats to structural stability where modifying structure design would not eliminate the need for brushing. Do not brush beyond 4 feet of the road as measured by the edge of the drivable road surface (not measured from turnouts or road shoulder). Maintain riparian overstory to provide stream shade. Maintaining a minimum height of riparian vegetation by brushing once every 3 years instead of once every 5 years. Prune riparian vegetation rather than completely removing it. Preserve as much ground vegetation as possible, and brush only where necessary for human safety rather than for convenience.
AQ3, S3	Construct fire lines and ditches by hand on all slopes greater than 35 percent.
S3, AQ1, AQ3, AQ5, AQ6	Use erosion control techniques such as tilling, waterbaring, or debris placement on fire lines. Construct waterbars on tractor and hand fire lines.
AQ6, AQ3, AQ1, W8	Avoid placement of any fire line where water would be directed into waterbodies, floodplains, wetlands, headwalls, or areas of instability.
AQ6, AQ12, AQ13, AQ3, W8, W4	Use temporary stream crossings to temporarily cross riparian management areas with any equipment or vehicles (including ATVs). Follow BMPs under Stream Crossings.

Fire and Fuels - wildfire use and prescribed burning (cont.)

AQ6, W4, W8, AQ3, AQ13	Do not locate incident bases, camps (including spike/remote camps), helibases, staging areas, constructed helispots, and other centers for incident activities in riparian management areas or within 200 feet of any waterbody, floodplain, or wetland.
AQ14, AQ3	Do not allow the introduction of volatile organic compounds into domestic waters supplies.
V2, A	Any associated surface-disturbing activities (i.e. control lines, access routes, helipads, etc.) must be located outside special status plant habitat.
V2	Treatments shall be designed to minimize travel through special status plant habitat.
V2	Treatments shall occur during periods of special status plant dormancy.
V2	Mechanical treatments shall not result in residual debris on special status plant sites.
V2, AQ1, AQ6	Locate incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities outside of RMAs. If the only suitable location for such activities is within the RMA, an exemption may be granted following a review and recommendation by a resource advisor. The advisor will prescribe the location, use conditions, and rehabilitation requirements, with attainment of aquatic objectives as a primary goal. Use an interdisciplinary team, including a fishery biologist, to predetermine incident base and helibase locations during presuppression planning, with attainment of aquatic objectives.
AQ1, AQ12, AQ14	Avoid delivery of chemical retardant, foam, or additives to surface waters, source water protection areas, or water of domestic use. An exception may be warranted in situations where overriding immediate safety imperatives exist, or, following a review and recommendation by a resource advisor and a fishery biologist, when the action agency determines an escape fire would cause more long term damage to aquatic habitats than chemical delivery to surface waters.
S3, V4, W8, W4	Down wood shall be left in place across treatment areas to meet down wood objectives (see Down wood table in Vegetation Section) rather than piled and burned.
W8, AQ10, AQ5, WSR1	Prohibit mechanical piling within riparian management areas and prohibit mechanical fuel reduction equipment within 75 feet of streams and other waterbodies.
AQ6, AQ9, W8	Prohibit tractor piling in areas that could deliver sediment to waterbodies, floodplains, and wetlands.
T1, T2, AQ6	Use temporary stream crossings if necessary for equipment to access the opposite side. Follow Temporary Stream Crossing practices under Roads section.
FU3, S3, AQ3, AQ11, AQ6, W8	Locate hand piles outside of or above the first slope break of fish-bearing streams, perennial streams, intermittent streams and lentic areas. The greater of these areas applies.
S3, AQ1, AQ3, AQ5, AQ6, T4-6	Install waterbars and seed all constructed firelines with native or adapted nonnative species as appropriate.
VR1, WSR1, AC1	Consider effects on visual quality when making fire suppression and rehabilitation decisions.

Vegetation Management

General

V2	Vegetation management projects could occur within special status plant habitat depending on treatment timing, extent and practice.
V2	Prescribed fire would be the preferred method of vegetation treatment in special status plant habitat.
V2	Vegetation treatments would be designed to minimize travel through special status plan habitat.
V2	Vegetation treatments would occur during periods of special status plant dormancy.
V2	Mechanical vegetation treatments would not result in residual debris on special status plant sites.
AQ10, V1, V5, W4, AC10, N1, W7, W8	There are instances where the use of desirable non-natives would be considered and used following the BLM Manual 1745. Examples of when non-natives would be considered include but are not limited to the following. 1. When natives are not currently available and seeding must proceed. Example: a. Fire rehabilitation situations where liability or excessive resource damage may force the BLM to act quickly. b. Road cuts and fills where soil loss is excessive. 2. When the substrate has been so degraded that native species will not do well for a considerable length of time. Natives often do not do well when over half the A horizon in the soil has been removed. Examples: a. Road cuts where top soil is gone (natives able to prevent soil loss no longer adapted). b. Other areas where excessive soil erosion has occurred. 3. When natives will not meet the objectives for the site. Example: a. Weed prevention is important and natives won't compete well enough to make a project effective. Seeding can be effective at reducing weed infestations. 4. When the environment is already highly altered and will remain so. Examples: a. In parking lot areas or on irrigated areas. b. Sites where native species cannot handle the use and non-natives can. c. Places where non-natives might add a desirable attribute to the site and not degrade other areas. d. Road shoulders where continual disturbance is assured. 5. When the large size of the seeding requires use of commercially obtained native species that...Example: a. May not be adapted to the area. b. May contaminate the gene pool of natives on the site.

Timber Sales and Forest Health Treatments

S1, S3, V4, AQ1, AQ3	To reduce soil disturbance and compaction, machine pile using excavator with grapple, or as an alternative to piling masticate or chip fuel loads.
S3, AQ1, AQ3, AQ5, AQ6, T4-6	Install water bars and apply native seed, when available, to skid trails and landings prior to temporary seasonal closures and following harvest operations. Consider ripping or subsoiling on skid trails and abandoned haul roads to reduce compaction where soil and slope conditions permit.
AC1, WSR1, S1, S3, VR1	Cutting areas would be shaped and designed to blend as closely as possible with natural terrain and landscape minimizing the effect on total forest vistas. Consideration will be given to future harvesting, impacts of road construction and other relevant factors.
S1, S3, V4, V5, AQ1, W8, VR1, FU3, V1	Use silvicultural practices that best meet the management goals and related land-use prescriptions. Each sale plan must include plans for prompt reforestation of the sale area after completion of the timber harvest operation by natural or artificial means (Disturbed areas will be artificially reforested when natural forest regeneration cannot be reasonably expected in 5-15 years).
V4, S1, S3, AQ1, VR1, WSR1, AQ11	Selection cutting, shelter wood cutting, clear cutting or their various modifications are available options. Clear cutting should not be used as a cutting practice where a) soil slope or other watershed conditions are fragile and subject to unacceptable damage; b) there is no assurance that the area can be adequately restocked within five years after harvest, or c) aesthetic values outweigh other considerations.
V4, V5, S1, S3, AQ1, VR1, WSR1, AQ12	Clear cutting should be used only where it is silviculturally essential to accomplish the relevant forest management objectives, or where the size of clear-cut blocks, patches, or strips is kept at the minimum necessary to accomplish silvicultural and other multiple-use management objectives. Cutting units should not exceed 40 acres in normal circumstances. More than 40 acres may be appropriate for salvage of an area already environmentally damaged by fire, insect or wind, or where larger cutting units would minimize road construction and other actions which would result in greater adverse environmental impact on the total forest.
AQ10, V1, V5, W7, W8	The selection of trees in partial cuts would be made in a manner to improve the genetic composition of the reforested stand.
V5	Logging units will be laid out in a manner that would reduce the risk of windthrow.
V2, V4, AQ11, W4, W7, W8	Encourage complete utilization of all harvested trees, including marginal and non-commercial species. Each forest products sale will provide opportunity for maximum use of all timber or other vegetative resources sold and to prevent destruction of unused materials, provided that such utilization is consistent with wildlife requirements.
A1, V4, V5,FU3,AQ1, S3, W1,W4, W5, W6,	To achieve fire hazard reduction, and to provide for reforestation and other intensive forest management opportunities, full consideration must be given at time of sale planning to desirability and method of slash disposal and site preparation. Factors to be considered include but are not limited to utilization of material, removal of debris, smoke management, fire protection, watershed protection, soil compaction, nutrient loss, wildlife habitat requirements, animal damage, and reforestation requirements.
S3, FU1	Plan for use of harvest systems that minimize damage to the site and reserved trees, and provide maximum protection from fire, insects, disease, wind, and other hazards.
AQ3, AQ6, AQ11, W4, W5, W8, V5, N1	Use directional felling systems where needed to minimize site damage; to protect streams, buffer strips, riparian areas, cultural sites, or reserved timber (including wildlife trees); or to increase timber utilization.
S1, S3, AQ6, AQ10	Logging systems that least disturbs the soil mantel and RMAs are preferred to those methods that contribute to soil movement.

Vegetation Management - Timber Sales and Forest Health Treatments (cont.)

S1, S3, AQ1, AQ3, AQ6, AQ12, AQ7	Tractor skid trails would be designed and located to avoid cross ridge and cross drainage operations. Tractor skidding would be avoided on slopes greater than 35 percent. Waterbars would be installed on skid trails when logging is finished.
S1, S3, W8, AQ3, AQ6, W5, W8, VR1, WC1	Landings will be of minimum size commensurate with safety and equipment requirements and located on stable areas to minimize the risk of material entering adjacent streams and waters. Landings should be located on firm ground away from RMAs. Avoid landing locations on unstable areas, steep side hills or areas which require excessive excavation.
VR1, V5, WSR1, AC1, R5, R6	Shape and design cutting areas to blend as much as possible with the natural terrain and landscape. The cutting area should minimize the effect on the total forest vista with due regard for future harvesting, impacts of road construction and other relevant factors.
S1, W5, W7, W8, L2, R5	Logging activities would be timed to minimize adverse impacts to other resource values.
S1, S3, V4,	Preserving the upper soil strata for the subsequent growing of future forest crops depends in large part on the care, planning, and professional judgment exercised in sale layout. Allow no more than 12 percent of the area, excluding permanent roads, to become compacted during initial stand entry. Reentry of previously compacted stands will include mitigation (ripping, tilling, etc.) to reduce compaction to acceptable levels.
A1, V4, V5,FU1,AQ1, S3, W1,W4, W5, W6,	Protection of streams, wetlands-riparian areas, and other waters. When planning operations along streams, lakes, bogs, swamps marshes, wet meadows, springs, seeps or other sources where the presence of water is indicated, protect soil and vegetation from disturbance that could cause non-attainment of Aquatic and Wildlife Objectives. Give special consideration around sources that supply domestic water. Use streamside buffer strips of vegetation to attain Aquatic Objectives and protect natural streamside beauty.
F3, V4, AQ4, AQ7, AQ9, L2	Where timber should be removed because it would be subject to excessive wind throw and where it is difficult to leave an adequate buffer of timber to shade and protect the stream, plan to reestablish cover along the stream after cutting is completed. Fast growing deciduous species or other suitable vegetation may be required to restore shade as quickly as possible. Leave understory vegetation as undisturbed as possible to filter runoff and help stabilize the soil.
AQ1, AQ3, S3	Avoid trapping and turning small streams out of their natural beds.
AQ3, AQ6, AQ11, W4, W5, W8, V5, N1	If debris should unintentionally enter any stream, such debris shall be removed concurrently with the yarding operation and before removal of equipment from the project site. Removal of debris shall be accomplished in such a manner that the natural streambed conditions and streambank vegetation are not disturbed.

Seeding for Vegetative Rehabilitation

AQ10, V1, V5, W4, AC10, N1, W7, W8	Guidance is also given in BLM Manual Section 1745; Introduction, Transplant, Augmentation, and Reestablishment of Fish, Wildlife, and Plants. This manual states that: "native species shall be used, unless through the NEPA process it is determined that . . ." 1. Suitable native species are not available. 2. The natural biological diversity will not be diminished. 3. Exotic or naturalized species can be confined within the proposed treatment area. 4. Analysis of appropriate information (including ecological site inventory) indicates that a site will not support reestablishment of a species that was historically part of the natural environment. 5. Resource management objectives cannot be met with native species.
AQ10, V1, V5, W4, AC1, N1, W7, W8, FU1	In addition to the initial 5 questions from BLM Manual Section 1754 emergency fire rehabilitation requires that the following questions are addressed: 1. Is the use of non-native plants necessary to meet objectives, e.g., consistent with applicable land use / activity plans? 2. Will non-native plants meet the objective(s) for which they are planted without unacceptably diminishing diversity and disrupting ecological processes (nutrient cycling, water infiltration, energy flow, etc.) in the plant community? 3. Will non-native plants stay on the site they are seeded and not significantly displace or interbreed with native plants?
AQ10, V1, V5, W4, AC10, N1, W7, W8	The BLM does not generally seed desirable non-native species where ecosystems are intact because there is no reason to do so if a site is properly functioning. Desirable non-natives would be given consideration when trying to restore degraded sites (i.e. rangeland infested with weeds or annual grasses, abandoned agriculture fields, areas with high probability of weed infestation after some form of disturbance, and areas where noxious weed infestations are being treated and competitive species are needed to aid in restoration/rehabilitation). Even in these cases the site would not be seeded to 100% desirable non-natives, a mixture of natives and desirable non-natives would be used (generally at least 50% natives) so that when those desirable non-natives that will eventually go out of the stand no longer persist, the seed source is there for native species regeneration. Some desirable non-native species will, however, persist indefinitely in open conditions. Ideally, seeding with non-natives should be a short-term measure to protect resource values until natives can re-establish. However, the objectives of each particular project, both short and long term, should drive the process of species selection. If research or information becomes available on a particular species that causes concern for the invasive potential of that species, it would not be included in a species mix.

Watershed Restoration

Riparian Vegetation Treatment

AQ6, W4, W8, AQ3, AQ11	Conduct non-commercial treatments of vegetation in the riparian area (as defined by the Aquatic objectives) as a means to help restore plant species composition and structure that would occur under natural disturbance regimes. The resulting benefits to the aquatic system can include desired levels of stream shade, bank stability, stream nutrients, large wood inputs, increased grasses, forbs, and shrubs, and reduced soil erosion. An additional benefit includes fuels reduction, which decreases the probability of a catastrophic fire in a watershed containing isolated populations of ESA listed fish. Treatments may include, but are not limited to, the following: thin conifers in even-age stands (typically plantations) to expedite late-seral conditions; thin conifer under-story to maintain viability of later-seral trees; create stand structure that would be expected under natural disturbance regimes; alder treatments; disease pocket treatments; create planting gaps to promote growth of conifers, deciduous trees, shrubs, and grass. Further, brush (felled trees) removal, planting of tree seedlings (conifer and deciduous) and shrubs, and animal damage control (no pesticides) are included. Equipment may include chainsaws, pruning shears, winch machinery, and slash-busters. The use of feller-buncher machinery is not specifically provided for here.
AQ6, W4, W8, AQ3, AQ11	An experienced silviculturist, botanist, ecologist, or associated technician, and wildlife biologist shall be involved in designing vegetation treatments.
W4, W5, W7, W8, AQ9, AQ10	No new roads or landings will be constructed in RMAs except at minimal crossings designed to attain Aquatic Objectives. Re-route existing roads and restore landings
AQ6, W4, W8, AQ3, AQ11	Thin conifers to accelerate attainment of late-seral conditions. A project example is thinning riparian areas in the ecosystem initiation or competitive exclusion developmental stages (Cary and Cuertis 1996) within plantations (i.e., where even-aged stands are growing because of previous silvicultural prescriptions, wildfire, or disease.)
AQ6, W4, W8, AQ3, AQ11	Thin dense understories to maintain survival of late-seral trees. A project example is thinning dense understory stands of early- to mid-seral ponderosa pine which have become established as a result of fire exclusion.
AQ6, W4, W8, AQ3, AQ11	Restore meadow sites along stream corridors or adjacent uplands through removal of conifers which have become established as a result of fire exclusion or other anthropogenic causes.
AQ6, W4, W8, AQ3, AQ11	To increase species diversity of riparian vegetation, fell conifer and/or hardwood trees (if above natural stocking levels) to create planting gaps.
AQ6, W4, W8, AQ3, AQ11	Trees felled within riparian area will be used to restore aquatic and terrestrial habitat by returning large and coarse woody debris levels to within the range of natural variability (RNV). Felled trees in excess of the RNV can be removed or piled and burned.
AQ7, AQ10, W8	Restoration and construction shall be designed to produce native facultative, wetland and obligate species in wetland/hydric soils and manage to have arrested or retrogressed growth forms in the woody species.
AQ1, AQ3, AQ5, AQ12	Within each sixth field sub watershed containing listed aquatic species or water quality limited streams, no more than 10% of the total riparian area, measured as adjacent stream length, will be treated within any one year period. This includes 10% of flowing streams, and 10% of intermittent streams, measured separately.

Riparian Vegetation Treatment (controlled burning)

AQ11, AQ12, W8, V4, AQ10	Implement controlled burning to help restore plant species composition and structure that would occur under natural fire disturbance regimes. Controlled burning of piled, pre-commercially thinned trees associated with other vegetation treatments is permissible. Resulting benefits include restoration of desired levels of stream shade, bank stability, soil erosion and stream turbidity, stream nutrients, and/or large wood inputs. Additional benefits include maintenance of late-seral (old-growth) trees which serve as sources of large wood to streams and a reduced potential of catastrophic fire within watersheds occupied by isolated populations of ESA-listed fish. This treatment should maintain the function of the riparian area as it affects the aquatic environment (e.g., temperature regime). Equipment would include drip torches and chainsaws, along with fire suppression vehicles and equipment.
AQ3	An experienced fuels technician, silviculturist, and fisheries biologist shall be involved in designing prescribed burn treatments.
AQ10, V1, V5, W4, AC1, N1, W7, W8	Prescriptions/burn plans should be written to help restore plant species composition and structure that would occur under natural fire regimes.
FU3, AQ11, V5, S3, AQ6	Low severity burns shall constitute the dominant type of controlled burn, resulting in a mosaic pattern of burned and unburned landscape. Low severity burns, as defined in the National Fire Plan, are characterized by the following: low soil heating, or light ground char, occurs where litter is scorched, charred, or consumed, but the duff is left largely intact, although it can be charred on the surface. Woody debris accumulation is partially consumed or charred. Mineral soil is not changed. Fire severity in forest ecosystems is low if the litter and duff layers are scorched but not altered over the entire depth.
FU3, AQ11, V5, S3, AQ6	Moderate-severity burns are permitted in no more than 20% of the riparian area to invigorate decadent aspen stands, willows, and other relevant deciduous species. Such burns shall be contained within the observable historic boundaries of the aspen stand or willow site. Moderate-fire severity, as defined in the National Fire Plan, is characterized by the following: moderate soil heating, or moderate ground char, occurs where the litter on forest sites is consumed and the duff is deeply charred or consumed, but the underlying mineral soil surface is not visibly altered. Light colored ash is present. Woody debris is mostly consumed, except for logs, which are deeply charred.
FU3, AQ11, V5, S3, AQ6	Non-commercial tree thinning and slash removal may be required to reduce fuel loads required to implement a low to moderate severity burn.
FU3, AQ11, V5, S3, AQ6	Tree thinning may be required prior to project implementation to create fuel loads necessary to carry a controlled fire.
AQ3, W8, FU3, AQ11, V5, S3, AQ6	To the greatest degree possible, avoid creating hydrophobic soils when burning slash piles within the riparian areas adjacent to the stream. Slash piles should be far enough away from the stream channel so as any sediment resulting from this action will be less likely to reach the stream.
AQ3, W8, FU3, AQ11, V5, S3, AQ6	Ignition can occur within certain riparian area as long as these BMPs and aquatic objectives are met.

Riparian Area Invasive Plant Treatment

General

AQ5, AQ10, V1, V4, W4, AC1, N1, W7, W8	Invasive plant treatment in riparian areas is intended to improve the function of riparian areas by restoring native ecosystem components. In general, improved riparian function due to invasive plant treatment will benefit listed fish by restoring inputs of native detritus to stream systems and reducing erosion. Treatment of invasive plant sites may include one or more of the following treatment methods listed below. A combination of treatments may be necessary to achieve effective control or eradication of an invasive plant species at many sites. All herbicide applications will comply with label instructions and may be further restricted as stated below. Treatment methods were selected due to their low potential for adversely affecting aquatic species, while facilitating riparian restoration through invasive plant control. Herbicides were selected due to their low toxicity to aquatic species and application methods were selected for their low potential for contaminating soils, thereby minimizing the risk of herbicides leaching to streams. Design invasive plant treatments to reduce or eliminate adverse effects to species and critical habitats proposed and/or listed under the ESA. This may involve surveying for listed or proposed plants prior to implementing actions within unsurveyed habitat if the action has a reasonable potential to adversely affect the plant species. Use site-specific project design (e.g., application rate and method, timing, wind speed and direction, nozzle type and size, buffers, etc.) to mitigate the potential for adverse disturbance and/or contaminant exposure to ESA species.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8, WSR1	Invasive plant infestation sites treated using herbicide, biological, manual or mechanical methods may be revegetated by planting cuttings, seedlings, or seeding.
AQ6, AQ10, V1, V4, W4, AC1, N1, W7, W8, WSR1	Site preparation can involve removal of litterlduff layer suitable to allow proper soil to seedroot contact. This will be accomplished by scuffing/scalping micro-sites (generally less than one square meter) with hand tools within the larger planting/seeding site.
AQ6, AQ10, V1, V4, W4, AC1, N1, W7, W8, WSR1, S3	Minimize ground disturbance by clearing only the area necessary for effective planting.

Manual and Mechanical

AQ5, AQ10, V1, V4, W4, AC1, N1, W7, W8	Hand pulling of weeds - Uprooting is performed either by hand or using hand (non-motorized) tools. Generally appropriate for non-rhizome forming, tap-rooted species andlor species which produce only from seed. Treatment occurs when plant growth stage and soil conditions allow, and prior to seed-set for annual species. Hand pulling of emergent invasive plants is included.
AQ5, AQ10, V1, V4, W4, AC1, N1, W7, W8	Seed clipping - Weed seed heads are cut, bagged, and removed from the area. The remainder of plant is left intact but is likely to be treated with another method.
AQ5, AQ10, V1, V4, W4, AC1, N1, W7, W8	Stabbing weeds - Some invasive plants can be severely weakened or klled by severing or injuring the carbohydrate storage structure at the base of the plant. Depending on species, this structure may be a root corm, storage rhizome, or taproot. Can be accomplished with shovel, hoe, or similar hand tool.

Manual and Mechanical (cont.)

AQ5, AQ10, V1, V4, W4, AC1, N1, W7, W8	Girdling - A strip of bark is removed around the base of susceptible woody species.
AQ5, AQ10, V1, V4, W4, AC1, N1, W7, W8	The vascular cambium, or inner bark, which translocates carbohydrates between roots and leaves, is removed
AQ5, AQ10, V1, V4, W4, AC1, N1, W7, W8	Cutting weeds- Removal of the above-ground portion of an invasive plant by cutting with chainsaw, handsaw, pruning shears, or similar hand held device. Also includes mowinglcutting with a string-trimmer type machine, which does not have wheels or contact the ground.
AQ5, AQ10, V1, V4, W4, AC1, N1, W7, W8	Solarization (ground cover)of weeds - Invasive plant infestations may be covered with plastic, geotextile, cardboard, or other ground cover material to kill the plant and roots or reduce plant vigor prior to treatment with another method.
AQ12, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Minimize treating invasive plants on banks from the stream when listed aquatic species are present.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Use the least ground disturbing method that results in effective invasive plant treatment.

Biological Controls

AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Biological control is the inoculation of an infestation site with insects, parasites, or pathogens that specifically target the invasive plant species of concern. Treatment of invasive plant infestations with biological controls is a gradual process requiring several years to reach full effectiveness. Subsequent treatment with other methods may also occur.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8, L2	All biological controls used will be U.S. Animal and Plant Health Inspection Service and state approved.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8, L2	Agents demonstrated to have direct negative effects on non-target organisms will not be released.

Herbicide Treatments

AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8, L2	Stem-injection - Stems of actively growing species are injected with herbicide, usually near the base of the plant.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Cut-stump -Herbicide is applied by spray, squirt, or Wickinglarge woodiping to the stump of a plant (usually a shrub or tree) shortly after the shoot or trunk is cut down.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Wicking, & wiping - Use a sponge or wick to wipe herbicide onto foliage, stems, or trunk. Use of Wickinglarge woodiping method reduces the possibility affecting non-target plants.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Spot application - Herbicide is directly sprayed onto target plants only, and spraying of desirable, non-target vegetation is avoided. Includes backpack and hand-pumped spray or squirt bottles, which can target very small plants or parts of plants (foliage, stems, or trunk).
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Hack & squirt - Woody species are cut using a saw or axe or drilled; herbicide is then immediately applied to the cut with a backpack sprayer, squirt bottle, syringe, or similar equipment.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Only daily use quantities of herbicides will be transported to the project site. For extremely remote locations, such as portions of the Lower John Day River, less than a 5 day quantity will be transported.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	In order to allow efficient volatilization of naptha solvent, application like sethoxydim will only occur during warm (above 60°F), dry weather.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Do not apply herbicides if precipitation is likely within 24 hours.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	The only herbacide application methods for plants emergent from water are stem injection,wicking or wipping, and hand-held spray bottle application. No application to submerged aquatic vegetation with any herbicide is included.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Areas used for mixing herbicides will be placed where an accidental spill will not run into surface waters or result in groundwater contamination. Impervious material will be placed beneath mixing areas in such a manner as to contain any spills associated with mixing/refilling.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Equipment cleaning and storage and disposal of rinsates and containers will follow all applicable state and Federal laws.

Herbicide Treatments (cont.)

AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	When approved herbicides are transported to a project site in a watercraft (inflatable boat, motor boat, etc), the following protections shall be implemented: no more than one day volume of herbicide(s) shall be transported to project site; herbicide(s) shall be transported in one gallon or smaller containers, sealed in a water- and air-tight plastic bag, and placed in a buoyant dry-bag. The entire package should be securely tied to the watercraft.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	When consistent with label instructions, use water when diluting herbicides prior to application.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	A spill cleanup kit will be available whenever herbicides are used, transported, or stored.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	A certified/licensed pesticide applicator will oversee all herbicide application projects.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Use only surfactants or adjuvants in riparian areas that do not contain any ingredients on EPA's List 1 or 2, where listing indicates a chemical is of toxicological concern, or is potentially toxic with a high priority for testing.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Individual special status plants would be flagged or carefully mapped prior to weed treatment.
V2	In sites with special status plants, manual treatment would be preferred over chemical.
V2	Application of chemicals would be carefully controlled in/near sites with special status plants.
V2	Chemicals which result in residual effects would not be allowed in sites with special status plants.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Weed stem-injection: Individuals will be familiar with proper stem-injection methodology prior to treatment. Only aquatic glyphosate formulations will be used. New formulations may be used if they afford better or equivalent protection for aquatic species. The formulation can be used at up to 100% concentration for the stem injection method. The formulation will be diluted to 50% or less active ingredient when applied directly to fresh stem cuts using wicking and wiping and up to the percentage allowed by label instructions when applied to foliage using low pressure hand-held spot spray applicators. Larger emergent weeds can be treated with glyphosate by stem injection, and smaller emergent weeds by wicking/wiping and spot spray with hand-held sprayers. Wicking/wiping and hand-held spray bottle application of glyphosate is allowed to emergent weed plants less than four to five feet tall, and usually smaller. Emergent plants with stems over 0.75 inch in diameter will be treated by stem injection.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Cut-stump and hack & squirt : Herbicides which may be used are imazapyr, metsulfuron methyl, and aquatic labeled glyphosate. New herbacides may be used if they provide equivalent or better protection for aquatic species. Application with aquatic labeled glyphosate and aquatic labeled imazapyr allowed to waters edge and to bankfull level for metsulfuron methyl and imazapyr not labeled for aquatic use.

Herbicide Treatments (cont.)

AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Wicking and wiping: Herbicides to be used are chlorsulfuron, clopyralid, aquatic labeled glyphosate, imazapyr, metsulfuron methyl, sethoxydim, and sulfometuron methyl. New herbacides may be used if they provide equivalent or better protection for aquatic species. For perennial streams, Wicking and wiping application with aquatic labeled glyphosate and aquatic labeled imazapyr is allowed to waters edge and to bankfull level for chlorsulfuron, clopyralid, imazapyr (not aquatic labeled), metsulfuron methyl, sethoxydim, and sulfometuron methyl. For perennial streams, emergent weed-stems < 0.75 inches in diameter can be treated with wichng and wiping of aquatic labeled glyphosate. For intermittent and ephemeral channels, chlorsulfuron, clopyralid, aquatic labeled glyphosate, imazapyr, metsulfuron methyl, sethoxydim, and sulfometuron methyl can be applied to all dry portions of the channel.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Spot application: Herbicides to be used are chlorsulfuron, clopyralid, aquatic glyphosate, imazapyr, sethoxydim, metsulfuron methyl, and sulfometuron methyl. New herbacides may be used if they provide equivalent or better protection for aquatic species. Do not spot spray sethoxydim or clopyralid within 15 feet, and chlorsulfuron within 50 feet, of perennial stream bankfull. Do not spot spray sethoxydim, clopyralid, or chlorsulfuron within intermittent or ephemeral channels. Spot spray using aquatic labeled glyphosate and aquatic labeled imazapyr allowed to edge of water with hand-held, hand-pump spray or squirt bottles (no backpack sprayers). Do not spot spray sethoxydim or clopyralid within 15 feet, and chlorsulfuron within 50 feet, of perennial stream bankfull.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Do not spot spray sethoxydim, clopyralid, or chlorsulfuron within intermittent or ephemeral channels. Spot spray using aquatic labeled glyphosate and aquatic labeled imazapyr allowed to edge of water with hand-held, hand-pump spray or squirt bottles (no backpack sprayers). Hand-held spot spray of aquatic glyphosate to emergent weed (c 0.75 inches stem diameter) is allowed. Spot spray using metsulfuron methyl and sulfometuron methyl allowed to bankfull level of perennial streams with backpack sprayers, hand-pump sprayers, and squirt bottles. Spot spray of aquatic labeled glyphosate, imazapyr, metsulfuron methyl, and sulfometuron methyl within dry intermittent and ephemeral channels allowed onlywith hand-held, hand-pumped sprayers and squirt bottles (no backpack sprayers). Excluding backpack spot spray is a conservation measure intended to minimize overspray within channels, and subsequent "first flush" exposures to aquatic resources, while still allowing full efficacy of the treatment
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	For foliar backpack spray applications, use only low pressure sprayers producing droplet sizes between 200 and 800 microns to minimize drift. Backpack spray activities will only occur during conditions with low drift potential, defined as wind velocities greater than two and less than 10 mph, or as stated on the herbicide label.

Fuel Handling

AQ14, AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Transport no more than a one day supply of fuel for chainsaws and string trimmers into riparian areas. The exception would include very remote areas such as portions of the Lower John Day River. In those areas, transport no more than a 5 day supply.
AQ14, AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Fueling of chainsaws and string-trimmers will not occur within 100 feet of surface waters.

Riparian Vegetation Planting

AQ10, AQ11, V4	Conduct riparian vegetation planting as a means to help restore plant species composition and structure that would occur under natural disturbance regimes. The resulting benefits to the aquatic system can include desired levels of stream shade, bank stability, stream nutrients, large wood inputs, increased grasses, forbs, and shrubs, and reduced soil erosion. Activities may include the following: planting conifers, deciduous tress and shrubs; placement of sedge and or rush mats; gathering and planting willow cuttings. Equipment may include excavators, backhoes, dump trucks, power augers, chainsaws, and manual tools.
FV4, FU3	An experienced silviculturist, botanist, ecologist, or associated technician shall be involved in designing vegetation treatments.
W4, W5, W7, W8, AQ9, AQ10	No roads or landings will be constructed in RMAs.
V4, AQ10, AC1, WSR1	Species to be planted must be of the same species that naturally occurs in the project area.
AQ4, AQ6, V4	Tree and shrub species as well as sedge and rush mats to be used as transplant material shall come from outside the bankfull width, typically in abandoned flood plains, and where such plants are abundant.
V4, AQ10, AC1, WSR1	Sedge and rush mats should be sized as to prevent their movement during high flow events.
AQ4, AQ6, V4	Concentrate plantings above the bankfull elevation.

In-stream Habitat Structures

AQ4, AQ12, V4	Place large wood and/or boulders in stream channels and adjacent floodplains to increase channel stability, rearing habitat, pool formation, spawning gravel deposition, channel complexity, hiding cover, low velocity areas, and floodplain function. In areas where natural gravel supplies are low (immediately below reservoirs, for instance), gravel placement may be used to improve spawning habitat. Full channel-spanning porous boulder weirs (boulder weirs) can only be installed in streams with a legacy of splash damming, stream cleaning, or other activities that have resulted in highly uniform, incised, bedrock-dominated channels with few boulders or woody debris. Live and or dead trees may be removed to provide large wood for restoration projects, under special conditions described herein. Large wood, boulder, and gravel projects would include the use of log trucks and dump trucks for transport and excavator-type machinery, spyders, cable yarders, draft horses, or helicopters for placement
AQ4, AQ12, V4	Place large wood and boulders only in those areas where they would naturally occur and in a manner that closely mimics natural accumulations for that particular stream type. large wood includes whole conifer and hardwood trees, logs, and root wads. large wood size (diameter and length) should account for bankfull width and stream discharge rates. When available, trees with rootwads should be a minimum of 1 . 5 bankfull channel width, while logs without rootwads should be a minimum of 2.0 x bankfull width. Structures may partially or completely span stream channels or be positioned along stream banks.
AQ6, W4, W8, AQ3, AQ11	No conifers should be felled in the riparian area for in-channel large wood placement unless conifers are fully stocked and are consistent with prescriptions in vegetation treatment categories. Felled hazard trees can be used for in-channel wood placement.
AQ4AQ6, AQ12, V4	Key boulders (footings) or large wood can be buried into the stream bank or channel but shall not constitute the dominant placement method of boulders and large wood.

In-stream Habitat Structures (cont.)

AQ4AQ6, AQ12, V4	Anchoring large wood with cable should be used sparingly, primarily for the protection of infrastructure and in consideration of downstream landowner concerns. Before using cable, attempt to use, when feasible, the following anchoring alternatives, in preferential order: 1) use adequate sized wood sufficient for stability; 2) orient and place adequate sized wood in such a way that wood movement is unlikely; 3) use ballasting (gravel and/or rock) to increase the mass of the structure to resist movement; 4) use large boulders as anchor points for the large wood; and 5) pin wood to large rock with rebar to increase wood weight.
AQ4AQ6, AQ12, V4	Gravel augmentation should only occur in areas where the natural supply has been eliminated or significantly reduced through anthropogenic means. Gravel to be placed in streams shall be a properly sized gradation for that stream, clean, and non-angular. When possible use gravel of the same lithology as found in the watershed. After gravel placement, allow the stream to naturally sort and distribute the material.
AQ4AQ6, AQ12, V4	Full channel spanning boulder weirs are to be installed only in highly uniform, incised, bedrock-dominated channels to enhance or provide fish habitat in stream reaches where log placements are not practicable due to channel conditions (not feasible to place logs of sufficient length, bedrock dominated channels, deeply incised channels, artificially constrained reaches, etc.), where damage to infrastructure on public or private lands is of concern, or where private landowners will not allow log placements due to concerns about damage to their streambanks or property.
AQ4AQ6, AQ12, V4	Install boulder weirs low in relation to channel dimensions so that they are completely overtopped during channel-forming flow events (approximately a 1.5- year flow event). If larger boulders are needed to withstand bankfull flows, boulder size should be determined through a site-specific analysis - such as a shear stress analysis - and should not promote bank scouring and channel routing around the structure.
AQ4AQ6, AQ12, V4	Boulder weirs are to be placed diagonally across the channel or in more traditional
AQ4AQ6, AQ12, V4	"V" or "U" boulder weir configurations with the apex oriented upstream. bouldeweirs are to be constructed to allow upstream and downstream passage of all native fish species and life stages that occur in the stream. This can be accomplished by providing plunges no greater than 6" in height, allowing for juvenile fish passage at all flows.
AQ4AQ6, AQ12, V4	The use of gabions, cable or other means to prevent the movement of individual boulders in a boulder weir is not allowed.
AQ4AQ6, AQ12, V4	Rock for boulder weirs shall be durable and of suitable quality to assure permanence in the climate in which it is to be used. Rock sizing depends on the size of the stream, maximum depth of flow, plan form, entrenchment, and ice and debris loading
AQ4AQ6, AQ12, V4	The project designer or an inspector experienced in these instream structures should be present during installation.
AQ4AQ6, AQ12, V4	Full spanning boulder weir placement should be coupled with measures to improve habitat complexity and protection of riparian areas to provide long-term inputs of large wood.
W7, W8, AQ10, AQ5, WSR1	A wildlife biologist must be fully involved in all "Individual Tree Removal" planning efforts, and involved in making decisions on whether individual trees are suitable for nesting or have other important listed bird habitat value.
AQ4AQ6, AQ12, V4	For large wood restoration projects in RMAs, trees may be removed by cable, horses or helicopters, and felled directly into the stream. Felled trees may be stock piled for later use for instream restoration projects.

In-stream Habitat Structures (cont.)

W7, W8, AC1, AQ13	No suitable nesting trees greater the 36" dbh are to be removed. Trees greater than 36" may be felled if a wildlife biologist determines those trees do not provide suitable nesting habitat
AQ6, W4, W8, AQ3, AQ11, V4	Individual trees or small groups of trees (<5) should come from the periphery of permanent openings (roads, etc) or from the periphery of non-permanent openings (e.g., plantations, along recent clear-cuts, etc).
W7, W8, AC1	Single trees may only be removed from the first two lines of trees.
W7, W8, AC1, AQ13	Trees selected for harvest for large wood restoration projects must be spaced at least one site potential tree height apart and at least one crown width from any trees with potential nesting structure for ESA listed bird species.
W7, W8, AC1, AQ4AQ6, AQ12, AQ13	No conifers should be felled in the riparian area for in-channel large wood placement unless conifers are fully stocked and are consistent with vegetation objectives. Felled hazard trees should be used for in-channel wood placement.
W7, W8, AC1, AQ4AQ6, AQ12, AQ13	When removing large wood from blow-down or an area burned by a wildfire, consult a wildlife biologist to determine which trees can be removed without adversely affecting wildlife habitat.

Large Wood, Boulder, and Gravel Placement

AQ4, AQ12, V4	Place large wood and/or boulders in stream channels and adjacent floodplains to increase channel stability, rearing habitat, pool formation, spawning gravel deposition, channel complexity, hiding cover, low velocity areas, and floodplain function. In areas where natural gravel supplies are low (immediately below reservoirs, for instance), gravel placement may be used to improve spawning habitat. Full channel-spanning porous boulder weirs (boulder weirs) can only be installed in streams with a legacy of splash damming, stream cleaning, or other activities that have resulted in highly uniform, incised, bedrock-dominated channels with few boulders or woody debris. Live and or dead trees may be removed to provide large wood for restoration projects, under special conditions described herein. Large wood, boulder, and gravel projects would include the use of log trucks and dump trucks for transport and excavator-type machinery, spyders, cable yarders, draft horses, or helicopters for placement
AQ4, AQ12, V4	Place large wood and boulders only in that area where they would naturally occur and in a manner that closely mimics natural accumulations for that particular stream type. Large wood includes whole conifer and hardwood trees, logs, and root wads. large wood size (diameter and length) should account for bankfull width and stream discharge rates. When available, trees with root wads should be a minimum of 1 . 5 bankfull channel width, while logs without root wads should be a minimum of 2.0 x bankfull width. Structures may partially or completely span stream channels or be positioned along stream banks.
AQ6, W4, W8, AQ3, AQ11	No conifers should be felled in the riparian area for in-channel large wood placement unless conifers are fully stocked and are consistent with prescriptions in vegetation treatment categories. Felled hazard trees can be used for in-channel wood placement.
AQ4AQ6, AQ12, V4	Key boulders (footings) or large wood can be buried into the stream bank or channel but shall not constitute the dominant placement method of boulders and large wood.
AQ4AQ6, AQ12, V4	Anchoring large wood with cable should be used sparingly, primarily for the protection of infrastructure and in consideration of downstream landowner concerns. Before using cable, attempt to use, when feasible, the following anchoring alternatives, in preferential order: 1) use adequate sized wood sufficient for stability; 2) orient and place adequate sized wood in such a way that wood movement is unlikely; 3) use ballasting (gravel and/or rock) to increase the mass of the structure to resist movement; 4) use large boulders as anchor points for the large wood; and 5) pin wood to large rock with rebar to increase wood weight.

Large Wood, Boulder, and Gravel Placement (cont.)

AQ4AQ6, AQ12, V4	Gravel augmentation should only occur in areas where the natural supply has been eliminated or significantly reduced through anthropogenic means. Gravel to be placed in streams shall be a properly sized gradation for that stream, clean, and no angular. When possible use gravel of the same lithology as found in the watershed. After gravel placement, allow the stream to naturally sort and distribute the material.
AQ4AQ6, AQ12, V4	Full channel spanning boulder weirs are to be installed only in highly uniform, incised, bedrock-dominated channels to enhance or provide fish habitat in stream reaches where log placements are not practicable due to channel conditions (not feasible to place logs of sufficient length, bedrock dominated channels, deeply incised channels, artificially constrained reaches, etc.), where damage to infrastructure on public or private lands is of concern, or where private landowners will not allow log placements due to concerns about damage to their streambanks or property.
AQ4AQ6, AQ12, V4	Install boulder weirs low in relation to channel dimensions so that they are completely overtopped during channel-forming flow events (approximately a 1.5- year flow event). If larger boulders are needed to withstand bankfull flows, boulder size should be determined through a site-specific analysis - such as a shear stress analysis - and should not promote bank scouring and channel routing around the structure.
AQ4AQ6, AQ12, V4	Boulder weirs are to be placed diagonally across the channel or in more traditional.
AQ4AQ6, AQ12, V4	"V" or "U" boulder weir configurations with the apex oriented upstream. bouldeweirs are to be constructed to allow upstream and downstream passage of all native fish species and life stages that occur in the stream. This can be accomplished by providing plunges no greater than 6" in height, allowing for juvenile fish passage at all flows.
AQ4AQ6, AQ12, V4	The use of gabions, cable or other means to prevent the movement of individual boulders in a boulder weir is not allowed.
AQ4AQ6, AQ12, V4	Rock for boulder weirs shall be durable and of suitable quality to assure permanence in the climate in which it is to be used. Rock sizing depends on the size of the stream, maximum depth of flow, plan form, entrenchment, and ice and debris loading
AQ4AQ6, AQ12, V4	The project designer or an inspector experienced in these instream structures should be present during installation.
AQ4AQ6, AQ12, V4	Full spanning boulder weir placement should be coupled with measures to improve habitat complexity and protection of riparian areas to provide long-term inputs of large wood.
W7, W8, AQ10, AQ5, WSR1	A wildlife biologist must be fully involved in all "Individual Tree Removal" planning efforts, and involved in making decisions on whether individual trees are suitable for nesting or have other important listed bird habitat value.
AQ4AQ6, AQ12, V4	For large wood restoration projects in RMAs, trees may be removed by cable, horses or helicopters, and felled directly into the stream. Felled trees may be stock piled for later use for instream restoration projects.
W7, W8, AC1, AQ13	No suitable nesting trees greater the 36" dbh are to be removed. Trees greater than 36" may be felled if a wildlife biologist determines those trees do not provide suitable nesting habitat
AQ6, W4, W8, AQ3, AQ11, V4	Individual trees or small groups of trees (<5) should come from the periphery of permanent openings (roads, etc) or from the periphery of non-permanent openings (e.g., plantations, along recent clear-cuts, etc).
W7, W8, AC1	Single trees may only be removed from the first two lines of trees.

Large Wood, Boulder, and Gravel Placement (cont.)

W7, W8, AC1, AQ13	Trees selected for harvest for large wood restoration projects must be spaced at least one site potential tree height apart and at least one crown width from any trees with potential nesting structure for ESA listed bird species.
W7, W8, AC1, AQ4AQ6, AQ12, AQ13	No conifers should be felled in the riparian area for in-channel large wood placement unless conifers are fully stocked and are consistent with vegetation objectives. Felled hazard trees should be used for in-channel wood placement.
W7, W8, AC1, AQ4AQ6, AQ12, AQ13	When removing large wood from blow-down or an area burned by a wildfire, consult a wildlife biologist to determine which trees can be removed without adversely affecting wildlife habitat.

Reconnection of Existing Side Channels and Alcoves

AQ4AQ6, AQ12, V4, W8	Reconnect and/or restore existing side channels and alcoves to increase rearing habitat for juvenile fish and high flow refuge areas for all life stages of fish. Functioning side channels have inlet and outlet connections to the main channel and often contain flow only during flood events-bankfull or greater. Functioning alcoves are back-water channels that typically contain water during both low and high flows. This action includes the removal of plugs which block water movement through side channels and alcoves. Further, side channel and alcove improvements include fill removal within channels and alcoves, large wood and/or boulder placement, riparian planting, etc. Boulder placement may be used in the main river to stabilize the channel and bring the entrance of the side channel into alignment (vertically and horizontally). Construction would involve use of heavy equipment, such as excavators, spyders, backhoes, and dump trucks. These BMPs do not cover creation of new side channels, or excavation of severely aggraded (completely filled in) side channels and alcoves.
AQ4, AQ6, AQ7	Excavated material removed from side-channels or alcoves shall be hauled to an upland site or spread across the adjacent floodplain in a manner that does not restrict floodplain capacity.
AQ4, AQ6, AQ7	Design and construct side-channels in such a manner as to prevent the capture and relocation of the main channel.
AQ4, AQ6, AQ7, AQ11	Design project to naturally maintain inlet and outlet connections with the main stream channel (i.e., placement of large wood to increase local scour).

Head-cut Stabilization and Associated Fish Passage

AQ4, AQ6, AQ12	Stabilize active or potentially active head-cuts to prevent further channel degradation (upstream migration of head-cut) and to promote downstream channel aggredation. In streams currently or historically occupied by fish, provide fish passage over the stabilized headcut. Construction would involve use of heavy equipment, such as excavators, spyders, backhoes, dump trucks. These BMPs do not fully cover structures that include the use of gabion baskets, sheet pile, concrete, articulated concrete block, and/or cable anchors; and straight weirs, which disperse flows and can cause channel widening and thus structure "flanking" (erosion around the ends of the structure). The choice of design should be based on site characteristics and limitations (i.e., channel slope, bed material type), but may also be based on material availability, economics, land use, design competence or familiarity, and/or regulatory restrictions (i.e., jump heights for fish).
AQ6, AQ13	Rock and organic material placement is often used on severe headcuts in meadow areas to stop further channel incision. Stream types are typically Rosgen "C" and "E" channel types.

Head-cut Stabilization and Associated Fish Passage (cont.)

AQ6, AQ13	When armoring a head-cut, use sufficient sizes and amounts of material to prevent continued up-stream movement of the headcut. Materials can include both rock and organic materials which are native to the area.
AQ6, AQ13	Focus stabilization efforts in the plunge pool, the head cut, as well as a short distance of stream above the headcut.
AQ6, AQ13	Minimize lateral migration of channel around head cut ("flanking") by placing rocks and/or organic material at a lower elevation in the center of the channel cross section to direct flows to the middle of channel.
AQ6, AQ12, AQ13	In streams with current or historic fish presence, provide fish passage over stabilized head-cut. Log or rock weir structures may be used to provide fish passage.
AQ6, AQ12, AQ13	Short-term headcut stabilization (including emergency stabilization projects) may occur without associated fish passage measures. However, fish passage must be incorporated into the final head cut stabilization action and be completed during the first subsequent in-water work period.
AQ6, AQ12, AQ13	In streams without current or historic fish presence, it is recommended to construct a series of downstream log or rock weirs to expedite channel aggradation.
AQ6, AQ12, AQ13	Rock and log weirs are very low channel spanning structures that may be used to stabilize streambeds and halt channel incision in low gradient streams (generally less than 2%).
AQ6, AQ12, AQ13	Construct weirs in a 'V' shape, oriented with the apex upstream, and lower in the center to direct flows to the middle of channel.
AQ6, AQ12, AQ13	Key weirs into the stream bed to minimize structure undermining due to scour, preferably at least 2.5 their exposure height. The weir should also be keyed greater than 8 feet into both banks, if feasible.
AQ6, AQ12, AQ13	If several structures will be used in series, space the weirs at the appropriate distances to promote fish passage of all life stages of native fish. Incorporate State fish passage criteria (jump height, pool depth, etc.) in the design of weir structures. Recommended weir spacing should be no closer than the net drop divided by the channel slope (for example, a one-foot high weir in a stream with a two-percent gradient will have a minimum spacing of 50-feet.
AQ6, AQ12, AQ13	Include fine material in the weir material mix to help seal the weir channel bed, thereby preventing subsurface flow. Geotextile material can be used as an alternative approach to prevent subsurface flow.
AQ6, AQ12, AQ13	Large roughness elements, such as wood and boulder placement, are the preferred head-cut treatment for those areas where large wood and boulders provide natural grade control. This technique is applicable to a wide range of stream types, from low gradient meandering streams (less than 1%) to high gradient cascade channels (greater than 8%). The goal of using large roughness elements is not to completely halt the incision process, but rather to slow it down and spread the elevation change over a greater length of channel. Because log jams are porous structures, not all of the sediment will be held in place; sediment inputs, however, will be spread out over time and space.
AQ6, AQ12, AQ13	Rock and wood structures should mimic natural colluvial features, such as debris flow or landslide deposits, to provide channel stabilization.
AQ6, AQ12, AQ13	Rock and wood should be sized so that it is not mobile during the design flood. An engineering technical note regarding buoyancy is available through NRCS (http:llarge woodww.or.nrcs.usda.gov/technicallengineerin~eng-notes.html).
AQ6, AQ12, AQ13	To promote or maintain fish passage, ensure that wood and boulder structures should contain enough spaces to allow for up and downstream movement of fish

Removal of Legacy Structures

AQ6, AQ12, AQ13	Remove large wood, boulders, rock gabions, and other in-channel structures that were constructed to improve fish habitat but were installed in a manner that was and continues to be inappropriate for the given stream type. Examples of such structures, which were typically installed in the 1980s and early 1970s, include boulder configurations in meadow streams, stair-step perpendicular log weirs, and rock gabions. These legacy structures typically resulted in widened stream channels, increased width/depth ratios, decreased sinuosity, and increased stream exposure to solar radiation. Removal of legacy structures would include the use of excavator-type machinery, spyders, backhoes, and dump trucks.
AQ6, AQ12, AQ13	If the structure being removed contains material (i.e., large wood, boulders, etc) not typically found within the stream or floodplain at that site, remove material from the 100-year floodplain.
AQ6, AQ12, AQ13	If the structure being removed contains material (i.e., large wood, boulders, etc) that is typically found within the stream or floodplain at that site, the material can be reused to implement habitat improvements described under Large Wood, Boulder, and Gravel Placement activity category in these BMPs
AQ6, AQ12, AQ13	If the structure being removed is keyed into the bank, fill in "key" holes with native materials as to restore contours of stream bank and floodplain. Compact the fill material adequately to prevent washing out of the soil during over bank flooding. Do not mine material from the stream channel to fill in "key" holes.
AQ6, AQ12, AQ13	When removal of buried (keyed) structures may result in significant disruption to riparian vegetation and/or the floodplain, consider using a chainsaw to extract the portion of log within the channel and leaving the buried sections within the streambank.
AQ6, AQ12, AQ13	Assess sites for a potential to headcut below the natural stream gradient.
AQ6, AQ12, AQ13	If headcutting and channel incision are likely to occur due to structure removal, additional measures must be taken to reduce these impacts.
AQ6, AQ12, AQ13	If the structure is being removed because it has caused an over-widening of the channel, consider implementing other restoration actions to decrease the width to depth ratio of the stream at that location to a level commensurate with upstream and downstream (within the same channel type).

Riparian Juniper Treatment (non-commercial)

AQ4, AQ6, V4	Fell juniper trees occurring in riparian and associated uplands to help restore natural plant species composition and structure that would occur under natural fire regimes. The associated benefits to aquatic and riparian environments include the following: reduction of soil erosion into stream channels; increased frequencies and diversity of herbaceous, shrub, and tree species; increased bank stability and stream nutrients. Associated uplands include those areas where juniper stands are or will create conditions that result in lost ground cover and increased sedimentation into stream channels; upland treatments would only be covered if those treatments directly benefit the aquatic environment. Treatments will emphasize the removal of junipers above natural stocking levels. Equipment may include the use of feller-buncher type equipment, slashbuster, chainsaws, winch machinery, and/or prescribed fire.
W1, V4, S3, AQ1, A3, AQ4, WSR1, AC1	Do not cut old-growth juniper, which typically has several of the following features: sparse limbs, dead limbed or spiked-tops, deeply furrowed and fibrous bark, branches covered with bright-green arboreal lichens, noticeable decay of cambium layer at base of tree, and limited terminal leader growth in upper branches (Miller et al. 2005).

Riparian Juniper Treatment (non-commercial) (cont.)

W1, V4, S3, AQ1, A3, AQ4, WSR1, AC1	Where ground vegetation is sparse, leave felled juniper in sufficient quantities to promote reestablishment of vegetation and prevent erosion.
S3, AQ6, AQ7, V4, L1, W7	If seeding is a part of the action, consider whether seeding would be most appropriate before or after juniper treatment.
AQ4, AQ6, AQ12	Where appropriate, move cut juniper stems into the stream channel and floodplain to provide aquatic benefits. Juniper can be felled or placed into the stream to promote channel aggradation as long as such actions do not obstruct fish movement, cover spawning gravels of ESA-listed fish or increase width to depth ratios.
AQ4, AQ6, AQ12	Do not place juniper in streams if the action will preclude the stream from attaining its natural sinuosity.
W4, V1	In forest and juniper woodland Bio-physical Settings, management activities must retain a minimum of 10% of live trees per acre including dominants. These trees are not to be counted toward future snag recruitment.
AQ6, AQ12, AQ13, V4	Prohibit activities that would degrade the sediment regime of perennial, perennial interrupted or intermittent stream channels. Activities may be allowed if the long term intent of an activity is to restore stream physical function (e.g. juniper removal, thinning conifer encroachment, etc). The combination of BLM actions to restore upland watershed conditions and other landowner activities shall not risk (1% or 100 year event) degrading sediment and flow regimes longer than 3 years. Limit treatment of riparian areas within each sixth field sub watershed, to less than 10% of the total riparian vegetation within any one year period. As an exception, low intensity burns backing into riparian areas may not exceed 50% of riparian area in 6th field watershed.

Bank Restoration

AQ4, AQ6, AQ12	Restore eroding stream banks to reduce chronic bank erosion, improve water quality, restore natural channel cross-sections, expand floodplain area, promote growth of riparian vegetation and create undercut banks for adult and juvenile fish hiding cover. Projects will not significantly restrict the channel migration zone and ability of the channel to form and maintain habitat. Construction may involve use of heavy equipment, such as excavators, spyders, backhoes, and dump trucks.
AQ4	Work will focus on eroding stream banks, primarily the outside edge of meander bends.
V4, AQ10, AC1, WSR1	To the extent possible, use bank stabilizing materials that would naturally occur at that site (such as large wood, woody and herbaceous plantings, native sedge/rush mats, and native rock).
AQ4, AQ6, VR1, WSR1	Stream banks may be reshaped and sloped where the objective is to reduce blank slope angle to provide more favorable planting surfaces. Such work should not change the location of the bank toe.
AQ4, AQ6, VR1, WSR1	Jute matting or other biodegradable material can be used with plantings to help prevent erosion of affected banks.

Floodplain Overburden Removal

AQ4, AQ6, AQ7	Remove anthropogenic overburden and fill, such as dredged mine tailings, railroad beds, dikes, berms, levees, and other fill types, from floodplains to restore natural floodplain functions. Such functions include overland flow during high-water events, dissipation of flood energy, increased water storage to augment low flows, sediment and debris deposition, growth of riparian vegetation, nutrient cycling, and development of side channels and alcoves. Construction would involve use of heavy equipment, such as excavators, earthmovers, scrapers, backhoes, front-end loaders, dump trucks, and bull dozers.
AQ4, AQ6, AQ7	Create floodplain characteristics (elevation, width, gradient, length, and roughness) that mimic, those that would naturally occur at that stream and valley type.
AQ4, AQ6, AQ7	Overburden or fill comprised of native materials, which originated from the project area, may be used to reshape the floodplain, placed in small mounds on the floodplain, used to fill anthropogenic holes, buried on site, and/or disposed into upland areas.
AQ4, AQ6, AQ7	To the greatest degree possible, non-native fill material, originating from outside the project area, shall be removed from the floodplain to an upland site.
AQ4, AQ6, AQ7	Where it is not possible to remove all portions of dikes and berms, create openings with culverts and/or breaches. Place culverts through or remove portions of such structures to pass high flows-bankfull or greater- into floodplain areas. The width of a culvert or breach should be equal to or greater than the bankfull width of the stream. Culverts and breaches should be located at a depositional area of the channel. Design proper number and location of culvert and breach sites to help prevent fish stranding as high flows recede.
AQ1, AQ5, AQ12, AQ8, HM1	Conduct a contaminant survey for mine tailing removal projects prior to project implantation. If contaminants are found above levels set by the Environmental Protection Agency, consult with appropriate agencies.
AQ4, AQ6, AQ7, S3	Consider decompaction of soils once overburden material is removed.

Livestock Grazing, Wild Horses

Grazing Use

V4, AQ10, AC1, WSR1	Consider livestock quarantine, removal, or timing limitations in weed infested areas.
WSR1, AQ1, AQ4, AQ11, L1	Develop alternative sources of water to lessen the grazing pressure on the riparian habitat.
WSR1, AQ1, AQ4, AQ11	Maintaining adequate untreated peripheral zones around important moist-sites (i.e. wet sedge meadows, springs, riparian zones).
S3, AQ6, AQ7, V4, L1, W7	Consider modifying season of use to avoid trampling of biological crusts in the dry season in areas where biological crusts exceed 10 percent of the potential ground cover.
S3, AQ6, AQ7, V4, L1, W7	Consider defining and scheduling spring and fall grazing at the fine scale to reflect actual soil moisture conditions to avoid disturbance of biological crust when soils are extremely dry.

Grazing Use (cont.)

AQ1, AQ3, AQ11, L1	Limit livestock trailing, bedding, watering, salting, loading, and other handling efforts to those areas and times that will not retard or prevent attainment of aquatic objectives.
V2	Adjust livestock grazing use season to accommodate special status plants.
V2	Concentrate livestock use/movement away from special status plant habitat; i.e., eliminate trailing, salting and/or watering sites that might affect special status plants.
AQ1, AQ3, AQ11, L1	Adjust wild horse and burro management to avoid impacts that prevent attainment of aquatic Objectives.
V2, AQ4, AQ6, AQ9, HB1	Wild horse use in special status plant habitat would be monitored and herd size would be adjusted as needed to minimize impacts.
AQ11, AQ12, W8, V4, AQ10	Place of salt or other supplements to distribute livestock throughout uplands and away from riparian areas.
AQ1, AQ3, AQ11, L1	Use riding and herding livestock to control use in sensitive areas.
AQ1, AQ3, AQ11, L1	"In order to meet aquatic objectives in developing livestock grazing systems and pasture designs, consider: o Changing class of stock from cow/calf pairs to herded sheep or yearlings; either eliminating hot season grazing (i.e., grazing during the hottest part of summer) or scheduling hot season grazing on a rotational basis (e.g., only one year out of every three); o Locating salt away from riparian zones; o Laying out pasture fences so that each pasture has as much riparian habitat as possible; o Locating fences so that they do not confine or concentrate livestock near the riparian zone; o Developing alternative sources of water to lessen the grazing pressure on the riparian habitat; and o As a last resort, excluding livestock completely from riparian by protective fencing.

Developments

S3, AQ6, AQ7, V4, L1, W7	Livestock developments include fences, corrals, seedings, water gaps/stream crossings, and other activities.
W1, WSR1, AC1	Fence types may include permanent barbed-wire, high-tension, smooth-wire, let-down, electric, buck and pole, and other similar types.
W1, WSR1, AC1, S3	Fence construction may involve use of all-terrain vehicles, flatbed trucks, and manual power tools.
L1, AQ4, AQ5, AQ6	Water gap and/or stream crossings construction may involve dump trucks and excavator-type equipment. The size of equipment used should be commensurate with the project requirements. Follow BMPs under 'Watershed Restoration" to guide heavy equipment use in and around stream channels."
AQ4, AQ6	Fence placement should allow for lateral movement of a stream.

Developments (cont.)

AQ11, AQ12, W8, V4, AQ10	Minimize vegetation removal, especially potential large wood recruitment sources, when constructing fence lines. No conifers should be felled in the riparian area conifers are fully stocked and are consistent with prescriptions in vegetation treatment categories.
L1, AQ4, AQ5, AQ6	Locate crossings and/or water gaps where stream banks are naturally low.
AQ12	When possible, crossings and gaps should not be constructed within known or suspected spawning areas (e.g., pool tailouts where spawning may occur).
AQ6, AQ12	Fences at stream crossings and water gaps should not inhibit up or downstream movement of fish and or significantly impede bedload movement. Consider passage of large wood and other debris when constructing fence and water gaps.
AQ4, AQ6	If necessary at water gaps, the stream bank and approach lanes can be stabilized with native vegetation and/or angular rock to reduce chronic sedimentation. The stream crossing or water gap should be armored with up to cobble-size rock, and use angular rock if natural substrate is not of adequate size.
S3, V2, AQ9, W8	Livestock crossings or water gaps should not be located in areas where compaction or other damage may occur to sensitive soils and vegetation (e.g., wetlands) due to congregating livestock.
S3, V2, AQ9, W8	The maximum width of a water gap or stream crossing should be no less than 10 feet and no more than 20 feet wide in the upstream-downstream direction (NRCS, 2001).
AQ5, AQ12	When using pressure treated lumber for fence posts only, complete all cutting/drilling offsite so that treated wood chips and debris does not enter water or flood prone areas.
W1, WSR1, AC1	All new fences will be built to standard Bureau wildlife specifications. Wildlife escape devices will be installed and maintained in water troughs.
S1, S3, W8, AQ3, AQ6, W5, W8, VR1, WC1	Locate new livestock handling and/or management facilities outside of riparian management areas (RMAs, see Aquatic Resources section in Chapter 2). For existing livestock handling facilities inside the RMAs, assure that facilities do not prevent attainment of aquatic objectives. Relocate or close facilities where these objectives cannot be met.
S3, AQ6, AQ7, V4, L1, W7	Install water developments (i.e., spring developments, pipelines/troughs and reservoirs) to facilitate upland distribution and reduce concentration in riparian wetland areas of livestock, wildlife and wild horses.
S3, V2, AQ9, W8	If necessary, install hardened crossings and water access points, or water gaps to direct livestock use to specific watering locations and reduce use over larger riparian wetland areas.
V2, AQ4, AQ6, AQ9, AQ11	Plant desirable forage species in uplands to attract livestock away from riparian or other sensitive areas.
S3, AQ6, AQ7, V4, L1, W7	Fence to delineate pastures associated to area specific management objective(s), or to establish permanent, temporary or seasonal exclusion from specific areas.
V4, AQ10, AC1, WSR1	Install barriers (i.e., trees, brush, boulder, gap fences) to reduce access or avoid specific areas.

Developments (cont.)

AQ13, AQ9, AQ6, W1,W4, W5, W6, W7, W8, A1, V4, V5,FU1,AQ1, S3	Spring development may provide a more dependable source of water for livestock and wildlife while protecting the source from trampling. In the major canyons the springs can improve livestock distribution by pulling livestock from the canyon bottoms, allowing use of previously unused rangeland. These developments will permit a variety of grazing systems.
AQ13, AQ9, AQ6, W1,W4, W5, W6, W7, W8, A1, V4, V5,FU1,AQ1, S3	Develop springs by hand labor or backhoe to install a buried collection system. A short pipeline may be installed to deliver water to a trough. Ramps, rocks or flatboards are installed in all water troughs to allow small birds and mammals to gain access to and/or escape from the water. As springs are developed, fence to protect riparian vegetation, water source and areas where significant overflow from troughs occurs to protect riparian vegetation.
S3, AQ6, AQ7, V4, L1, W7	Locate troughs associated with spring developments and off channel water on ground with a slope, vegetated buffer, and distance (25 feet minimum) away from stream channels, floodplains, and lentic areas sufficient to ensure that the disturbed area associated with the guzzler, trough, or drinker does not contribute sediment to or remove vegetation from hydric soils, riparian or wetland areas. Use automatic shutoff or efficiently return overflow to the source in a short return interval.

Recreation

Recreation Activities

AQ1, AQ3, AQ6, AQ11, S3	Better control or close recreation use along streams and within riparian areas. This could include removal of designated campgrounds, dispersed camp sites, and foot trails as well as treatments of off-road vehicle (ORV) roads/trails in riparian areas.
AQ1, AQ3, AQ6, AQ11, S3	Dispersed and developed campground restoration usually include some or all of the following: removal of campground fill material and/or structures, such as berms, toilets, fences, picnic tables; ripping or sub-soiling sites to remove compaction; stream bank restoration; placement of rock or other barriers such as fences to block vehicle access; gravel surfacing of existing sites to designate access routes and parking; planting shrubs and trees to restore streamside, floodplain, and meadow vegetation; reducing or clearing noxious weeds.
AQ4, AQ6, AQ7	Design remedial actions to restore floodplain characteristics-elevation, width, gradient, length, and roughness-in a manner that closely mimics, to the greatest degree possible, those that would naturally occur at that stream and valley type.
AQ4, AQ6, AQ7	Overburden or fill comprised native materials, which originated from the project area, can be used to reshape the floodplain, placed in small mounds on the floodplain, used to fill anthropogenic holes, buried on site, and/or disposed into upland areas.
AQ4, AQ6, AQ7	To the greatest degree possible, non-native fill material, originating from outside the project area, shall be removed from the floodplain to an upland site.
AQ4, AQ6, AQ7, S3	Consider de-compaction of soils once overburden material is removed.
W8,V4, AQ6, AQ10, AQ12, S3	Place barriers-boulders, fences, gates, etc-outside of the bankfull width and across traffic routes to prevent unauthorized ORV access into and across streams and RMAs.

Recreation Activities (cont.)

AQ1, AQ3, AQ6, AQ11, S3	Design, construct, and operate recreation facilities, including trails and dispersed sites, in a manner that does not retard or prevent attainment of the aquatic objectives. Complete and ID team analysis of aquatic objectives prior to construction of new recreation facilities inside riparian management areas (RMAs, see aquatic resources section in Ch2). For existing recreation facilities inside RMAs, assure that the facilities or use of the facilities will not prevent attainment of aquatic objectives. Relocate or close recreation facilities where aquatic objectives cannot be met.
AQ1, AQ3, AQ6, AQ11, S3	Adjust dispersed and developed recreation practices that retard or prevent attainment of aquatic objectives. Where adjustment measures such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures are not effective in meeting aquatic objectives and avoiding adverse effects on aquatic objectives, eliminate the practice or occupancy.
S1, S3, W8, AQ3, AQ6, W5, W8, VR1, WC1	Prohibit solid and sanitary waste facilities in RMAs.
S3, AQ4	Do not allow "Open" OHV designations on sensitive soils.
V2	Campgrounds, OHV play areas and other areas concentrating recreational uses would be developed well away from special status plant habitat.
V2	OHV use would be limited to designated routes when adjacent to special status plant habitat.
W4, W5	Manage public vehicle access to maintain the habitat effectiveness of security cover and key seasonal habitat (such as winter range) for deer and elk.
W5, W4	Consult with ODFW prior to undertaking major construction, and/or surface disturbing activities in high value wildlife habitats.

Roads, Trails, and Landings

AQ6, AQ12, AQ13	Removal or replacement of existing road-stream crossing structures (culverts, bridges, etc.). Construction may involve use of heavy equipment, such as excavators, cranes, backhoes, front-end loaders, dump trucks, bull dozers, and on occasion pile-drivers and helicopters. Upstream of the isolated project area, coffer dams (diversions) constructed with non-erosive materials are typically used to divert stream flow with pumps or a by-pass culvert. Heavy equipment may only be used when an ID team has determined that it will not retard attainment of Aquatic Objectives. Also follow BMPs under Watershed Restoration - Removal of Legacy Structures
AQ3, AQ6, T1	Projects should be reviewed by an engineer with design input from an experienced fisheries biologist and hydrologist. Such personnel shall oversee or review the project during construction to ensure that BMPs are being properly implemented. A licensed engineer will provide design review for projects that result in structures that are greater than 20′ in width.
AQ4, AQ6	Assess sites for a potential to headcut below the natural stream gradient. Use field surveys and quantitative analysis to assess headcut potential.

Culverts, Bridges, Stream Crossings, and Construction Sites (cont.)

AQ4, AQ12, AQ13	Flood relief culverts will be designed to restore and maintain access to off-channel holding areas for aquatic species (including fish). Therefore, existing floodplain channels should be the first priority for location of flood relief culverts. Flood relief culverts should be installed in a manner that match floodplain gradient and do not lead to scour at the outlet.
AQ6, AQ12, AQ13	The stream slope at the stream crossing shall approximate the average channel gradient of the natural stream up and downstream of the structure. The maximum slope for closed-bottomed culverts shall not exceed 6% because of difficulties in retaining substrate in the culvert at higher gradients. Open-bottom arches can be placed in channel gradients that exceed 6%.
AQ6, AQ13	If a closed culvert is used, the bottom of the culvert shall be buried into the streambed not less than 20% and not more than 50% of the culvert height. For open-bottomed arches and bridges, the footings or foundation shall be designed to be stable at the largest anticipated scour depth. Substrate and habitat patterns within the culvert should mimic stream patterns that naturally occur above and below the culvert. Coarser material may be incorporated to create velocity breaks during high flows, thereby improving fish passage, and to provide substrate stability.
AQ6, AQ12, AQ13	The use of riprap is permissible above bankfull height to protect the embankment. If the use of riprap is required for structure stability, then an additional analysis may be required to ensure that the structure is not undersized. Riprap may only be placed below bankfull height when necessary for protection of abutments and pilings for bridges. However, the amount and placement of riprap around the abutments and/or pilings should not constrict the bankfull flow.
AQ6, AQ12, AQ13	Grade control structures are permitted to prevent headcutting above or below the culvert or bridge. Grade control typically consists of boulder structures that are keyed into the banks, span the channel, and are buried in the substrate. The hydraulic impacts of grade control structures must be analyzed for effects on the stream crossing.
S3, AQ1, AQ3, AQ5, AQ6, T4-6	Incorporate road dips into stream crossing design, to ensure catastrophic flood events will transport overflow back into the stream channel instead of onto the road bed.
AQ6, AQ12, AQ13	Structures containing concrete must be cured or dried (approx 7 days) before they come into contact with stream flow.
AQ6, AQ12, AQ13, W8	In cases of structure removal or replacement, restore the stream channel and reconnect the floodplain at the site. Also follow BMPs under Watershed Restoration - Removal of Legacy Structures
AQ6, AQ12, AQ13, W8	Limit activities of mechanized equipment to streambank areas or temporary platforms when installing or removing structures, unless channel is dewatered.
AQ6, AQ12, AQ13, W8, S3	If access is required through construction site, a temporary crossing shall be constructed and removed within the same instream period and the disturbed ground shall be rehabilitate to pre-existing conditions. Rehabilitation will include re-vegetating, re-contouring and controlling surface erosion through the following two years.
AQ6, AQ12, AQ13, W8	Re-vegetate disturbed areas with vegetation of similar structure and composition to pre-existing vegetation and ground cover. Use native species. Conserve on site woody vegetation for rehabilitating disturbed areas (in channel structure, upland down wood, bank erosion control, etc). Flush cut or remove entire root wad. If wood is kept on site to meet upland down wood objectives, place away from area prone to firewood use. Large woody debris resulting from clearing activities may be placed in the downstream channel to meet aquatic objectives.
W8,V4, AQ6, AQ10, AQ12, S3	Mitigate loss of snags where snags will not create a safety hazard.

Culverts, Bridges, Stream Crossings, and Construction Sites (cont.)

AQ6, AQ12, AQ13, W8	Design temporary crossings to pass existing flow plus the 10 year event (probability) for 6 hr rainfall events to account for summer thunderstorms or 24 hour event for winter flows.
AQ6, AQ12, AQ13	Monitor structures after high flow events, which occur during the first fall/winter/spring after project completion. Assess the following parameters: headcutting below natural stream gradient, substrate embeddedness in the culvert, scour at the culvert outlet, and erosion from sites associated with project construction. Apply remedial actions to correct.
AQ6, AQ12, AQ13	If necessary to meet Aquatic Objectives, per an ID team review, isolate construction area and remove fish from project area (see BMPs under Monitoring and Other Activities).
W8,V4, AQ6, AQ10, AQ12, S3	Limited cutting or removal of vegetation on the closed road-bed to the amount required to access the culvert site
S3, AQ4, AQ6	Minimize water velocity, and minimize water travel time on roads, road cuts, road fills, in ditches and in other drainage features containing coarse or fine sediment.
AQ4, AQ6	For road removal projects within riparian areas, recontour the affected area to mimic natural floodplain contours and gradient..
AQ13, AQ9, AQ6, W1,W4, W5, W6, W7, W8,	Restore natural drainage patterns and when possible promote passage of all fish species and life stages present in the area. Evaluate channel incision risk and construct in-channel grade control structures when necessary.
AQ6, AQ12	Use sediment control barriers immediately adjacent to the stream, between the disturbance areas and the stream as necessary to ensure no visible increase in stream turbidity occurs.
T1, T2, AQ6, W8	Space drainage features used for storm-proofing and treatment projects to prevent road surface runoff from entering stream channels.
AQ4, AQ6, AQ7	Dispose of slide and waste material in stable sites out of the flood prone area (the elevation at two times max bankfull depth). Waste material other than hardened surface material (asphalt, treated timbers, metal objects, etc) may be used to restore natural or near-natural contours.
AQ4, AQ6, AQ10, V4, W8	Minimize disturbance of existing vegetation in ditches and at stream crossings.
S3, AQ4	Conduct activities during dry-field conditions-low to moderate soil moisture levels
AQ6, AQ12, AQ13, W8	When removing a culvert from a first or second order, second order, or non-fishing bearing stream, ID team shall determine if culvert removal should require dewatering or fish removal or both as described under Monitoring and Other Activities.
AQ6, AQ12, AQ13, W8	Culvert removal on fish bearing streams requires dewatering and fish removal as described under Monitoring and Other Activities.
AQ5, AQ6, AQ14	Diversions constructed with material mined from the streambed or floodplains are not permitted.
AQ12	Pumps must have fish screens and be operated in accordance with state and federal fish screen criteria.
AQ12, AQ13	If diversion allows for downstream fish passage, (i.e., is not screened), place diversion outlet in a location to promote safe reentry of fish into the stream channel, preferably into pool habitat with cover.
AQ6, AQ10	Dissipate flow energy at the bypass outflow to prevent damage to riparian vegetation or stream channel.

Culverts, Bridges, Stream Crossings, and Construction Sites (cont.)

AQ5, AQ6, AQ12	When necessary, pump seepage water from the de-watered work area to a temporary storage and treatment site or into upland areas and filter water prior to reentering the stream channel.
AQ6, AQ12, AQ13, W8	When dewatering is no longer required, slowly release water back into the channel. Prevent loss of surface water downstream as the construction site streambed absorbs water. Prevent a sudden increase in stream turbidity. Monitor downstream during this process to prevent stranding of aquatic organisms below the construction site.
AQ6, AQ12, AQ13, AQ3, W8, W4	Use temporary stream crossings to access the opposite side with any equipment or vehicles (including ATVs). Follow BMPs under Stream Crossings.
AQ6	Use materials that would withstand 100-year flow events (e.g., concrete, well anchored concrete mats, etc.) on permanent low water ford crossings.
AQ6	Utilize natural bedrock geology to provide hardened and stable low water ford crossings. Where erosive soils exist, harden approaches with non-erodible materials on permanent crossings. Provide relief drainage on approaches.
AQ6, AQ12, AQ13, AQ3, W8, W4	Use washed rock/gravel in temporary low water ford crossings, where a non-fill structure is not possible.
AQ6, AQ12, AQ13, AQ3, W8, W4	Restrict access to temporary crossings.
AQ6, AQ12, AQ13, AQ3, W8, W4	Use ramped low water fords in debris flow susceptible streams (e.g., if the temporary crossing is a low water ford, access should be restricted to blocked residences, emergency vehicles, contractors, and BLM inspection personnel).

Road and Landing Construction, Maintenance, Renovation, and Improvements

AQ4, AQ6, AQ13, AQ13, W8, W4, W5	Road rehabilitation includeds everything from simple closures to more complex road obliteration and removal, with an overall goal of restoring hydrologic functions. This includes the following: eliminate or reduce erosion and mass-wasting hazards associated with roads; eliminate or reduce human access and associated impacts to aquatic systems; enhancing natural hydrologic processes through reduction of drainage network. Actions such as bridge and culvert removal, removal of asphalt and gravel, installing drainage culverts, constructing road dips, subsoiling or ripping of road surfaces, outsloping, waterbarring, fill removal, sidecast pullback, re-vegetating with native species and placement of large wood and/or boulders are included. Roadway barricading to exclude vehicular traffic is covered only if the overall road remediation project substantively addresses restoration of hydrologic function. This category also includes storm-proofing roads intended to remain open, thereby hydrologically disconnecting such roads from watershed streams. For culvert removals on closed roads, limited cutting or removal of vegetation on the closed road-bed to access the culvert site may be required. Construction would involve use of heavy equipment, such as excavators, backhoes, front-end loaders, dump trucks, and bull dozers.
AQ4, AQ6, AQ13, AQ13, W8, W4, W5, S3	Reconstruct road and drainage features that: do not meet design criteria or operation and maintenance standards; have been shown to be less effective for controlling sediment delivery; prevent attainment of terrestrial, aquatic, or riparian objectives; or do not protect watersheds from increased sedimentation and peak flows. Prioritize reconstruction based on current and potential damage to terrestrial, aquatic, or riparian resources; ecological value of the resources affected; and feasibility of options such as helicopter logging and road relocation out of riparian conservation areas.

Road and Landing Construction, Maintenance, Renovation, and Improvements (cont.)

W4, W5, W7, W8, AQ9, AQ10	Close and stabile or obliterate and stabilizing roads not needed for future management activities. Prioritize based on current and potential damage to terrestrial, aquatic, and riparian resources and ecological value of the resources affected.
AQ6, AQ7	For road removal projects within riparian areas, recontour the affected area to mimic natural floodplain contours and gradient to the greatest degree possible.
AQ6, AQ7	When obliterating or removing segments immediately adjacent to the stream, consider using sediment control barriers between the project and the stream.
AQ6, AQ7	Drainage features used for stormproofing and treatment projects should be spaced as to hydrologically disconnect road surface runoff from stream channels.
AQ4, AQ6, AQ7	Dispose of slide and waste material in stable sites out of the flood prone area (the elevation at two times max bankfull depth). Waste material other than hardened surface material (asphalt, treated timbers, metal objects, etc) may be used to restore natural or near-natural contours.
AQ6, AQ7, AQ10, AQ11	Minimize disturbance of existing vegetation in ditches and at stream crossings to the greatest extent possible.
S3	Conduct activities during dry-field conditions-low to moderate soil moisture levels
AQ11, AQ12	For culvert removal projects, restore natural drainage patterns and when possible promote passage of all fish species and life stages present in the area. Evaluate channel incision risk and construct in-channel grade control structures when necessary. Also follow BMPs under Watershed Restoration - Removal of Legacy Structures
S3, AQ6, AQ7,	Minimize water velocity, and minimize water travel time on roads, road cuts, road fills, in ditches and in other drainage features containing coarse or fine sediment.
AQ6, AQ12	During maintenance or repair, place woody debris from the road-crossing inlet downstream of the road crossing.
AQ6, AQ12	Monitor stream crossing structures after high flow events. Assess the following parameters: headcutting below natural stream gradient, structural damage, substrate embeddedness in the culvert, debris collection, embankment erosion and scour at the structure outlet and footings. Apply remedial actions to correct. Also follow BMPs under Watershed Restoration - Removal of Legacy Structures
W8, AQ6	Mitigate loss of snags where snags will not create a safety hazard.
W4, W5, W7, W8, AQ9, AQ10	Locate landings outside of Jurisdictional Wetlands and RMAs.
W4, W5, W7, W8, AQ9, AQ10	Locate new landings outside of Riparian Management Areas or at least 300 ft from waterbodies (whichever is greater) and avoid expanding existing landings in Riparian Management Areas when sediment delivery to stream channels could occur.
W4, W5, W7, W8, AQ9, AQ10, S3	Locate landings in areas with low risk for landslides.
AQ3, AQ13, AQ9, AQ10, W4, W8, S3	Retain vegetation on cut slopes unless it poses a safety hazard or restricts maintenance activities. Roadside brushing of vegetation should be done in a way that prevents disturbance to root systems and visual intrusions (such as avoid using excavators for brushing).

Road and Landing Construction, Maintenance, Renovation, and Improvements (cont.)

S3, AQ6, W5	Leave abandoned roads in a condition that provides adequate drainage without further maintenance. Close abandoned roads to traffic. Physically obstruct the road with gates, large berms, trenches, logs, stumps, or rock boulders as necessary to accomplish permanent closure.
S3, AQ4, AQ6, W5	Decommission or obliterate roads no longer needed.
W5	Manage public vehicle access to maintain the habitat effectiveness of security cover and key seasonal habitat (such as winter range) for deer and elk.
W4, W5, W7, W8, AQ6, AQ9, AQ10, S3	Keep roads and other facilities to a minimum. When needed to meet short and long term management objectives, they should be located, designed and constructed to the standards necessary for the total land use and resource values involved.
AQ5, AQ6, AQ14	Locate new roads to minimize the risk of material entering adjacent streams or other waters.
VR1, AC1, AQ6, S3, V4	Roads should fit the topography so that a minimum alteration of natural features will be necessary.
VR1, AC1, AQ6, S3, V4	Locate roads on stable terrain such as moderate sideslopes or ridgetops wherever possible. When roads must cross potential unstable terrain, design the road to the extent necessary to prevent unacceptable damage. Where sidecasting of waste material during road excavation will cover the downslope soil with rock and subsoil incapable of supporting productive vegetation, consider endhauling waste material to stable areas of more moderate topography.
VR1, AC1, AQ6, AQ9, S3, V4	Locate roads away from wet or marshy areas and other wetlands, meadows, riparian areas, and stream banks. Provide necessary drainage and streambank protection.
AQ6, S3, V4	Minimize the number of stream crossings. Cross streams as close to a right angles to the main channel as possible.
AQ5, AQ6, S3, V4	Areas of vegetation should be left or established between roads and streams.
W5	Avoid locating roads through crucial deer and elk winter range, when feasible.
VR1, AC1, AQ6, S3, V4, W5, W8	Roads should avoid being located through non-forest or non-commercial forest habitats with high wildlife values.
AQ3, AQ13, AQ9, AQ10, W4, W8	Avoid brushing along stream channels and floodplains. Brushing may be unavoidable if it is necessary for human safety or to avoid threats to structural stability where modifying structure design would not eliminate the need for brushing. Do not brush beyond 4 feet of the road as measured by the edge of the drivable road surface (not measured from turnouts or road shoulder). Maintain riparian overstory to provide stream shade. Maintaining a minimum height of riparian vegetation by brushing once every 3 years instead of once every 5 years. Prune riparian vegetation rather than completely removing it. Preserve as much ground vegetation as possible, and brush only where necessary for human safety rather than for convenience.
VR1, T1, AQ5, AQ6	Consistent with good safety practices and intended use, design each road to the minimum-use standards adapted to the terrain and soil materials to minimize surface disturbance and damage to water quality.
AQ5, AQ6, S3	Use a flexible design to minimize damage to soil and water quality.
VR1, AC1, AQ6, S3, V4	Design roads no wider than necessary to accommodate the immediate anticipated use.

Road and Landing Construction, Maintenance, Renovation, and Improvements (cont.)

S3, AQ6	Design cut and fill slopes at the normal angle of repose or less.
S3, T1, AQ6	Do not allow culvert out-flow to be discharged onto unprotected fill slopes. Install energy dissipaters at culvert outlets or in half rounds where needed.
AQ13	Design water crossing structures to provide for adequate fish passage, minimum impact on water quality, and the 25-year frequency storm. Increases in water yield and peak flows resulting from vegetation removal would be kept in mind when designing structures.
AQ6	Design roads to drain normally by outsloping and by grade changes whenever possible. Where outsloping is not feasible, use roadside ditches and culverts to drain roads onto undisturbed ground.
S3, AQ1, AQ3, AQ5, AQ6, T4-6	Provide dips, waterbars, and cross-drainage on all temporary roads.
AQ6	Place drainage diversions approximately 50 ft above stream crossings so that water may be filtered through vegetative buffers before entering the stream.
AQ5, AQ6, S3	Provide drainage where groundwater causes slope instability.
AQ5, AQ6, S3, T1, AQ13	Skew culverts approximately 30 degrees toward the inflow to provide better inlet efficiency.
AQ6, S3	Plan ditch gradients steep enough (generally greater than 2% to prevent sediment deposition.
AQ5, AQ6, S3, T1, AQ13	Limit excavation to the essential amount needed to meet the necessary road standards. Plan for stabilization of exposed soil and for rehabilitation of other environmental damage during construction.
AQ6, S3	Haul all excess material removed by maintenance operations to safe disposal areas. Apply stabilization measures on disposal sites if necessary to assure that erosion and sedimentation do not occur.

Mining

Mineral Development and Use

AQ3, W8, V2, V4, V5, W8	Develop inspection, monitoring, and reporting requirements for mineral activities. Evaluate and apply the results of inspection and monitoring to modify mineral plans, leases, or permits as needed to eliminate impacts that retard attainment of aquatic objectives.
AQ3, W8, V2, V4, V5, W7, W8	Require the claimant to obtain all required state and federal operating permits.
AQ5, AQ6, AQ14	Locate, design, operate and maintain sediment settling ponds in conformance with Oregon Department of Environmental Quality guidelines.
AQ6, W5	Use existing roads, skid trails and stream crossings whenever possible.
AQ5, AQ6, AQ12	Adequate drainage of surface runoff will be necessary for roads that are constructed or reconstructed for vehicular access to the mining area. If roads are to be utilized during winter months (October 15 - April 15) surface the roads with rock.

Mineral Development and Use (cont.)

R1, AQ3, AQ4, W1	Reclaim the mining area and access roads and trails at the conclusion of mining operations and at reasonable intervals to minimize disturbed areas not in use for a few years.
AQ5, AQ6	Construct a berm or trench between disturbed areas and water courses when needed to protect water quality.
W4, W5, W7, W8, AQ9, AQ10, S3	Stockpile topsoil for use during reclamation of the site. In the interim, stabilize stockpiled topsoil to prevent erosion and contamination of other resources in the area.
AQ6, S3	If erosion is predicted to occur from October 15 to May 15, contour and mulch disturbed areas that will not be mined for at least 30 days.
AQ5, AQ6	If possible, retain an undisturbed riparian buffer strip between mining operations and water courses to protect integrity of streambanks, provide for water temperature control, and for filtration of sediment from surface runoff.
AQ6, S3	Confine operations to bench areas rather than allow encroachment on the RMA.
AQ6, AQ10, V1, V2, V4, W4, AC1, N1, W7, W8	Locate and maintain sanitation facilities in accordance with state and local regulations and district policies.
AQ6, AQ12, AQ13, AQ3, W8, W4	Construct and rehabilitate temporary roads to minimize total surface disturbance, consistent with intended use.
W5	In areas of important big game habitat, consultation with the wildlife biologist will be necessary to reduce impacts on wildlife, particularly in areas such as ridgelines, saddles, and upper drainage heads.
W5	Manage public vehicle access to maintain the habitat effectiveness of security cover and key seasonal habitat (such as winter range) for deer and elk;
W5, W4	Consult with ODFW prior to undertaking major construction, and/or surface disturbing activities in high value wildlife habitats.

Lands and Realty

Land Acquisition, Exchange, Retention, or Disposal; Rights-of-Way, and Utility Corridors

AQ10, AQ11, AQ12, V2, W7	Use land acquisition, exchange, and conservation easements to meet RMP objectives and facilitate restoration of fish stocks and other species at risk of extinction.
AQ1, AQ3-AQ10	Adjust existing leases and permits, rights-of-way, and easements to eliminate effects that would retard or prevent attainment of the aquatic objectives. If adjustments are not effective, eliminate the activity. Where the authority to adjust was not retained, negotiate to make changes in existing leases, permits, rights of way, and easements to eliminate effects that would prevent attainment of the aquatic objectives. Priority for modifying existing leases, permits, rights of way, and easements will be based on the current and potential to attain aquatic objectives.
S3, W4, W5, AQ7	Disturbance from rights-of-way and/or disturbance in utility corridors use areas adjoining or adjacent to previously disturbed areas, rather than traverse undisturbed communities.
W5	In areas of important big game habitat, consultation with the wildlife biologist will be necessary to reduce impacts on wildlife, particularly in areas such as ridgelines, saddles, and upper drainage heads.
AQ10, AQ11, AQ12, V2, W7, W5	When categorizing public land for retention or disposal, and for identifying acquisition priorities, consider the following criteria: Threatened or Endangered or sensitive animal species habitat; riparian areas; important habitat for game animals; key big game seasonal habitat; and others.

Irrigation Screen Installation and Replacement (includes weir removal)

AQ12, AQ13	Irrigation screening and replacement is for existing diversions only and is focused on installing, replacing, or upgrading off-channel screens to improve fish passage or prevent fish entrapment in irrigation canals. This action also includes the removal of non-needed existing diversions that are less than six feet high or impound less than 15 acre feet of water. Construction would involve use of heavy equipment, such as excavators, backhoes, front-end loaders, dump trucks, and bull dozers.
AQ12, AQ13	All fish screens must be sized to match the landowner's documented or estimated historic water use and legal water right(s) which ever is less.
AQ12	Irrigation diversion intake and return points must be designed (to the greatest degree possible) to prevent all native fish life stages from swimming or being entrained into the irrigation system.
AQ8, W8, WSR1	Locate water drafting sites to avoid adverse effects to instream flows, and in a manner that does not retard or prevent attainment of aquatic objectives.
AQ6, AQ12, AQ13, AQ3, W8, W4	Screens, including screens installed in temporary and permanent pump intakes, must meet NMFS fish screen criteria (NMFS 1995). NMFS fish screen criteria applies to federally listed salmonid species under their jurisdiction as well as bull trout under Service jurisdiction.
AQ12, AQ13	Size of bypass structure should be big enough to pass kelt steelhead and migratory bull trout back into the stream.
AQ6, AQ12, AQ13	Abandoned ditches and other similar structures will be plugged or backfilled, as appropriate, to prevent fish from swimming or being entrained into them. Also follow BMPs under Watershed Restoration - Removal of Legacy Structures
AQ12, AQ13	When making improvements to pressurized irrigation systems, install a totalizing flow meter capable of measuring rate and duty of water use. For non-pressurized systems, install a staff gage or other measuring device capable of measuring instantaneous rate of water flow.

Monitoring and Other Activities

Fish Handling

AQ12, AQ13	Fish handling includes capture, removal, and relocation of fish.
AQ12, AQ13	All fish capture, removal, and handling activities shall be conducted by an experienced fisheries biologist or technician.
AQ6, AQ12, AQ13	Isolated captures - Install block nets at up and downstream locations and leave in a secured position to exclude fish from entering the project area. Leave nets secured to the stream channel bed and banks until fish capture and transport activities are complete. If block nets or traps remain in place more than one day, monitor the nets and or traps at least on a daily basis to ensure they are secured to the banks and free of organic accumulation and to minimize fish predation in the trap.
AQ12, AQ13	Hand collection - Collect fish by hand or dip nets, as the area is slowly dewatered.
AQ12, AQ13	Seining - Use seine with mesh of such a size to ensure entrapment of the fish of concern
AQ12, AQ13	Minnow traps - Traps will be left in place overnight and in conjunction with seining.
AQ10, AQ12, AQ13	Reduce risk of introduction of aquatic invasive species by sterilizing wading and sampling equipment.
AQ6, AQ12, AQ13, W8	Electrofishing - Prior to dewatering, use electrofishing only where other means of fish capture may not be feasible or effective. If fish are observed spawning during the in-water work period, electrofishing shall not be conducted in the vicinity of spawning adult fish or active redds. Only Direct Current (DC) or Pulsed Direct Current (PDC) shall be used for electrofishing. Conductivity <I00 use voltage ranges from 900 to 1100. Conductivity from 100 to 300 then use voltage ranges from 500 to 800. Conductivity greater than 300 then use voltage to 400. Begin electrofishing with minimum pulse width and recommended voltage and then gradually increase to the point where fish are immobilized and captured. Turn off current once fish are immobilized. Do not allow fish to come into contact with the electrofishing anode. Do not electrofish an area for an extended period of time. Remove fish immediately from water and handle as described below. Dark bands on the fish indicate injury, suggesting a reduction in voltage and pulse width and longer recovery time.
AQ6, AQ12, AQ13, W8	Do not dewater a channel in a way that halts water flow downstream beyond the project site. Gradually dewater and water project area to maintain downstream flow.

Survey and Monitoring

AQ3, AQ4	Projects may include but are not limited to surveys to document recreation use, resource values, aquatic and riparian attributes, cultural resources (including excavating test pits <1 square meter in size), and presence/absence surveys for listed terrestrial wildlife, bird, and plant species in the project area.
AQ12	When monitoring requires the relocation of fish or work in fish habitat, use personnel trained in methods that prevent or minimize disturbance of fish.
AQ12	Avoid impacts to fish redds. When possible, avoid sampling during spawning periods.
AQ1,W1, N1	Coordinate with other local agencies to prevent redundant surveys.
AQ6	Locate excavated material from cultural resource test pits away from stream channels.
AQ6, AQ7	Replace all material in test pits when survey is completed and stabilize the surface.
AQ5, AQ10, AQ12, AQ13	Reduce risk of introduction of aquatic invasive species by sterilizing wading and sampling equipment.

Appendix C: Noxious Weed Control Mitigations/Stipulations

The following District mitigation/stipulations apply to the District's Integrated Weed Management program for all noxious weed control activities all BLM lands except for WSAs without specific management plans or EA's pertaining to weed management:

1. Cultural (prevention) activities such as inspection (weed surveys), regulation (ROWs), sanitation (wash and clean vehicles) and education will be encouraged and enforced for all high priority developed multi-use recreational areas, especially those along the Lower John Day River.
2. Physical control practices (Mechanical) such as mowing, tilling, disking, seedbed preparation, and prescribed burning (if over 40 acres) treatments will require a separate EA. Small mechanical treatment areas of less than 5 acres may only require a CE.
3. All manual control practices (hand pulling and hand tools) will be done before seed ripe or dispersal and the plant residue collected as needed for burning (piles) or bagged and removed from site(s). On small isolated sites such as undeveloped primitive camp sites along the JDR manual control may be given priority consideration and users are encouraged to manually pull, grub, or hoe out the few plants to small patches of noxious weeds. Educational brochures identifying weed species of concern will be made available at all developed boating access points.
4. Biological control practices methods such as introduced insects, competitive seedings, pathogens or grazing (goats or sheep) will be given consideration District wide. ODA approved biocontrol agents (insects or pathogens) will be given emphasis for release to control/contain larger infestations where containment is major goal. The approval for release of beneficial insects or pathogens must use the same procedures as herbicides – using the Biological Control Agent Release Proposal (BCARP) and Record (BCARR). Only ODA approved biological control agents will be allowed for release after District and State Office approval.
5. A Special Status Plant and Animal survey or clearance will be done prior to any treatment.
6. A cultural survey or clearance is required before any soil surface disturbing activity from physical weed control practices (mechanical or prescribed fire) occurs. Hand pulling, grubbing or hoeing a few plants or scattered plants on public land sites less than 5 acres (such as undeveloped campgrounds along the Lower JDR in WSAs and/or WSRs is authorized)
7. All herbicide use will comply with USDI rules and policy, BLM policy and guidelines, Oregon State laws and regulations, OR Department of Agriculture (ODA) laws and regulations, Environmental Protection Agency (EPA) , federal pesticide laws (FIRCA), Oregon Department of Environmental Quality (DEQ) regulations, Local County Weed District Priorities and requirements and by Law must follow product label requirements.
8. All pesticide (herbicide) applicators are required to submit proposals using
   a. a Pesticide Use Proposal (PUP) form (which BLM may approve for use of up to 3 years, if same chemical, same target weed, and same area);
   b. a Pesticide Application Record (PAR) to be completed after application and promptly submitted to the district office.
9. All herbicide applications will only be applied by a Oregon State licensed and certified applicator.
10. Material Safety Data Sheets (MSDSs for each herbicide being applied will be at site with applicator, and guidelines and information found in "Oregon Pesticide Applicator Manual" as updated will be followed
11. Areas of known or suspected Federal Listed, Candidate or Proposed or Oregon Candidate (old C-1) or Species of Concern (old C-2) amphibians will have as a minimum 100-foot buffer strip from live water for all herbicide applications, with the exception for the use of Rodeo.

12. Use of existing trails/access routes or roads for emergency weed control activities will be allowed by vehicles even in WSAs, but use off existing routes for prescribed fire, herbicide application, or seeding practices will only be by ATV type vehicles. All seeding in WSAs will be by broadcast methods.
13. Herbicide Use Restrictions are as follows:
    a. No vehicle mounted or powered boom sprayers or handguns will be used within 25 feet of surface (live) water.
    b. No booms or powered equipment applicators would be used in riparian areas, where weeds are closely intermingled with trees and shrubs.
    c. Liquid herbicides can be applied (at a height of 0.5 ft to 2.5 ft. above ground) to areas for spot treatments with hand spraying (backpack) equipment (single nozzle, low pressure and volume) to within 10 feet of live water. Use of mule or horse mounted equipment would also be allowed.
    d. Spreader equipment (broadcast) could be used to apply granular formulations applied at a height of about 3.5 feet, to within 10 feet of the high water line of live water.
    e. Contact Systemic Herbicides (such as Glyphosate - Rodeo or Accord) may be allowed using hand wipe applications on individual plants up to the existing high water line.
    f. When wind speeds exceed 5 mph, no spray equipment will be used in riparian areas or near water, and no aerial applications are allowed in riparian or wetland areas. No aerial application of Glyphosate is allowed.
    g. No application of herbicides will occur if wind speeds exceed 8 mph.
    h. All aerial application of herbicides will be done only by helicopter and allowed within the constraints of the Final NW Area Noxious Weed Control Program EIS (1985) as supplemented 1987, and ROD pages 1-3 (May 5, 1987). A buffer strip of 100 feet will be established between target weed areas and any live water/riparian areas.
    i. No aerial application of herbicides will be permitted without written approval from the authorized officer.
    j. No aerial application of herbicides will be permitted when wind speeds exceed 5 mph.
    k. For OR/WA only 2,4-D, picloram (Tordon), dicamba, and glyphosate (Rodeo and Accord only) and approved combinations will be allowed as per ROD (1987) from Supplemental FEIS (1987). Acceptable formulations, EPA registration numbers, maximum rates of application, and mixture stipulations are referenced from BLM Approved list March 1994 (see Appendix 6 as updated) and from Table 1-3 p. 9 FEIS (1985)
    l. All chemicals will be applied only in accordance with BLM, EPA, ODA requirements, and Herbicide LABEL standards/stipulations.
    m. Pesticide Use Proposals (3 year approval) for herbicide application within boundaries of WSAs, or WAs, and RNAS will be reviewed and evaluated by Resource Area staff on a year to year basis.
    n. Monitoring pretreatment and post-treatment will be done yearly (pre and post spray applications) on all treated areas.
    o. In aerial applications a 500 foot unsprayed buffer strip will be left next to inhabited dwellings unless waived in writing by the residents. A 100 foot buffer of unsprayed strip will be left next to croplands and barns.
    p. Additional Herbicides if approved may be used subject to all the above mitigation measures, label restrictions and within limits of ROD or specific approval recommendations.
    q. The maximum rates of application for the four approved herbicides (per Table 3-1 from FEIS 1985): (ai = active ingredients of specific herbicide).

Rates for Herbicide Applications by Ground Methods (vehicle and hand)

Application of Single Herbicide:		Application of Tank Mixes:	
Herbicide	**Maximum Rate**	**Herbicide**	**Maximum Rate**
2,4-D Dicamba Glyphosate Picloram	3 lb ai/ac 6 lb ai/ac 3 lb ai/ac 1 lb ai/ac	2,4-D and Dicamba Picloram and 2,4-D	2 lb ai/ac 2,4-D 1.5 lb ai/ac Dicamba 0.5 lb ai/ac Picloram 1 lb ai/ac 2,4-D
Rates for Herbicide Applications by Aerial Method (helicopter only)			
2,4-D Picloram	3 lb ai/ac 1.0 lb ai/ac	2,4-D and Dicamba	2.0 lb ai/ac 2,4-D 1.5 lb ai/ac Dicamba
(ai = active ingredients of specific herbicide)			

14. All other stipulations and mitigation in FEIS (1985) pp. 1-7 to 1-10, Supplemental FEIS (1987) pp. 119-122, RODs (1986) or (1987), and the ROD for the national *BLM Vegetation Treatments Using Herbicides on BLM Lands in the 17 Western States Final Programmatic EIS* (October 2, 2007); see PEIS Appendix B; IM 2008-030) will apply. In addition, the stipulations and mitigation from the FEIS 1991 and its ROD will apply for all additional chemicals (herbicides) if or when approved for noxious weed control.

Appendix D: Special Status Plants Documented or Suspected on BLM Lands in the John Day Basin Planning Area

Species	Common Name	Occurrence	No. BLM Sites	STATUS (see below for explanation)			
				BLM	Federal	State	ONHIC
Achnatherum hendersonii				SEN	SOC	CA	1
Achnatherum wallowaensis				SEN	SOC		1
Astragalus collinus var. *laurentii*	Lawrence's milkvetch	Suspected		SEN	SOC	LT	1
Astragalus conjunctus var. *rickardii*	Idaho milkvetch	Suspected		STR			3
Astragalus diaphanus var. *diurnus*	transparent milkvetch	Documented	22	SEN		LT	1
Astragalus tegetarioides	bastard kentrophyta	Suspected		SEN	SOC	CA	1
Botrychium ascendens	triangle-lobe moonwort	Suspected		SEN	SOC	CA	1
Botrychium crenulatum	scalloped moonwort	Suspected		SEN	SOC	CA	1
Botrychium minganense	Mingan moonwort	Suspected		SEN			4
Botrychium montanum	mountain moonwort	Suspected		SEN	SOC		2
Calochortus longebarbatus var. *peckii* 1/	Peck's mariposa lily	Suspected		SEN	SOC	CA	1
Camissonia pusilla	little wiry suncup	Suspected		STR			3
Camissonia pygmaea	dwarf evening-primrose	Documented	1	SEN	SOC	CA	1
Carex idahoa	Parry's sedge	Suspected		STR	SOC		1
Coryphantha vivipara var. *vivipara*	cushion coryphantha	Suspected		STR			2
Cymopterus nivalis	Hayden's cymopterus	Suspected		SEN			2
Cypripedium fasciculatum 2/	clustered lady's slipper	Suspected		SEN	SOC	CA	2
Delphinium nuttallii	upland larkspur	Suspected		SEN			2
Heliotropium curassavicum	seaside helitrope	Suspected		SEN			2
Lepidium dictyotum var. *dictyotum*	alkali pepperweed	Suspected		STR			3
Lomatium ravenii	Raven's lomatium	Suspected		SEN			2
Luina serpentina	colonial luina	Suspected		SEN	SOC	CA	1
Malacothrix stebbinsii	Stebbin's malacothrix	Suspected		STR			3
Mimulus evanescens	disappearing monkeyflower	Suspected		SEN	SOC	CA	1
Myosurus sessilis	sessile mousetail	Suspected		STR	SOC	CA	1

Species	Common Name	Occurrence	No. BLM Sites	STATUS (see below for explanation)			
				BLM	Federal	State	ONHIC
Navarretia leucocephala ssp. leucocephala	whitehead navarretia	Suspected		SEN			2
Penstemon deustus var. *variabilis*	hot rock penstemon	Documented	3	STR			3
Phacelia minutissima	dwarf scorpion-weed	Suspected		SEN	SOC	CA	1
Rorippa columbiae	Columbia cress	Suspected		SEN		CA	1
Thelypodium eucosmum	arrow-leaf thelypody	Documented	46	SEN	SOC	LT	1
Thelypodium howellii ssp. *howellii*	Howell's thelypody	Suspected		STR	SOC		2-ex

1/ Conservation strategy in preparation
2/ Conservation assessment prepared (related to Western Oregon Survey and Manage)

Appendix A also indicates various status designations for each species. Following is an explanation of each:
BLM: SEN – Sensitive; STR - Strategic
Federal: SOC – Species of Concern
State: CA – Candidate; SE – Endangered; ST – Threatened

ONHIC (Oregon Natural Heritage Information Center):
1 – Threatened with extinction or presumed to be extinct throughout their entire range;
2 – Threatened with extirpation or presumed to be extirpated from the state of Oregon;
2-ex – Presumed to be extirpated from Oregon;
3 – More information is needed before status can be determined;
4 – Of conservation concern but not currently threatened or endangered

Appendix E: Biophysical Setting Summary

BPS #	Name	Fire Regime	Average Fire Size	Class A Dominant Species	Class A Canopy Cover	% Low ARV	% Mid ARV	% High ARV	Class B Dominant Species	Class B Canopy Cover	% Low ARV	% Mid ARV
81123	Columbia Plateau Steppe and Grassland	2	No Data	PSSP, POSE, FEID	10-50%	4	5	6.5	PSSP, POSE, FEID	50-90%	56	80
81065	Columbia Plateau Scabland Shrubland	5	No Data	ERTH4, POSE, LOMA, STST5	0-10%	4	5	6.5	ERTH4, ARRI2, POSE, STST5	0-10%	4	5
R2SBDWwt	Stiff and Low Sagebrush with Trees	3	No Data	PSSP6, ACTH7, ACHY, POSE	0-4%	7	10	13	ARAR8, ACHY, PSSP6	5-9%	46	65
81080	Inter-Mountain Basins Big Sagebrush Shrubland	3	No Data	POSE, HECO2, AMSIN, EPILO	0-10%	11	15	19.5	POSE, ARTR, GRSP, HECO2	0-10%	25	35
91062	Inter-Mountain Basins Mountain Mahogany W & S land	4	No Data	CELE3, ARTR2, CHRYS, SYMPH	0-40%	4	5	6.5	CELE3, ARTRV, PUTR2, SYMPH	10-50%	7	10
R2SBWYwt	Wyoming Big Sagebrush Semi Desert with Trees	4	No Data	ACHY, HECOC, CHVI8, ARTR	0-10%	11	15	19.5	ARTR, ACHY, CHVI8, HECO2	11-25%	35	50
R2SBMTwc	Mountain Big Sagebrush with Conifers	4	No Data	PSSP6, FEID, SYMPH, ARTRV	0-5%	14	20	26	ARTRV, PUTR2, CONIF, SYMPH	6-25%	35	50
R2PIJU	Juniper Steppe Woodland	3	No Data	EPAN, CRAC, CRYP, SENEC	2-10%	4	5	6.5	ARTRV, SYOR, ACOC3, CRAC	5-10%	4	5
81053x	N. Rocky Mt. Ponderosa Pine Woodland-Xeric	3	No Data	ARTR, CHVI8, AGSP, ELEL5	0-50%	18	25	32.5	PIPO, JUOC, FEID, ARTR	25-70%	4	5
81053m	N. Rocky Mt. Ponderosa P. Woodland Mesic	1	No Data	PIPO, FEID, PUTR2	0-30%	7	10	13	PIPO, PUTR2, FEID	41-80%	4	5
81045	N. Rocky Mt. Dry-Mesic Montane Mixed Conifer Forest	1	1000	PIPO, PSME, LAOC, CAGE2	0-20%	7	10	13	PIPO, PSME, LAOC, ABGR	41-100%	4	5
910470	Northern Rocky Mountain Western Hemlock-Western Red-cedar Forest	3	No Data	CEVE, ACGL, SASC, PHMA	0-100%	11	15	19.5	PSME, ABGR, PIPO, LAOC	51-100%	28	40
911670	Rocky Mountain Poor Site Lodgepole Pine Forest	4	No Data	PICO	0-80%	18	25	32.5	PICO	41-85%	39	55
91046	Northern Rocky Mountain Subalpine Woodland and Parkland	3	No Data	VASC, POPU3, FEVI	0-20%	18	25	32.5	PIAL, VASC, POPU3	21-60%	14	20
91055	Rocky Mt. Subalpine Dry-Mesic Spruce Forest	4	No Data	VASC, ARCO9, ACOC3	0-40%	4	5	6.5	PICO, ABLA, PIEN, PSME	31-60%	14	20

% High ARV	Class C Dominant Species	Class C Canopy Cover	% Low ARV	% Mid ARV	% High ARV	Class D Dominant Species	Class D Canopy Cover	% Low ARV	% Mid ARV	% High ARV	Class E Dominant Species	Class E Canopy Cover	% Low ARV	% Mid ARV	% High ARV
100	ARTR, CHVI4, ERNA1, PSSPS	0-30%	11	15	19.5										
6.5	ARRI2, ERTH4, POSE, STST5	11-30%	63	90	100										
84.5	ARAR8, PSSP6, ACHY	10-20%	7	10	13	JUOC, PSSP6	6-40%	11	15	19.5					
45.5	ARTR, GRSP, POSE, HECO2	11-20%	28	40	52	ARTR, GRSP, POSE, HECO2	21-40%	7	10	13					
13	CELE3, ARTRV, CHRYS, SYMPH	10-50%	11	15	19.5	CELE3, ARTRV, PUTR2	11-40%	32	45	58.5	CELE3, SYMPH, ARTRV, FEID	10-60%	18	25	32.5
65	ARTR, CHVI8, ELEL5, HECO2	26-35%	18	25	32.5	JUNIP, ARTR	0-15%	4	5	6.5	JUNIP	16-90%	4	5	6.5
65	ARTRV, PUTR2, SYMPH, CONIF	26-45%	11	15	19.5	CONIF, ARTRV, PUTR2, SYMPH	10-25%	7	10	13	CONIF, ARTRV, PUTR2, SYMPH	26-80%	4	5	6.5
6.5	ARTRV, SYOR, POSE, ACOC3	11-20%	7	10	13	JUOC, SYOR, FEID	11-30%	25	35	45.5	JUOC, FEID, BASA	21-40%	32	45	58.5
6.5	PIPO, ARTR, PUTR, AGSP	0-25%	18	25	32.5	PIPO, ARTR, CELE3, ELEL5	0-25%	28	40	52	PIPO, CELE3, JUOC, FEID	25-70%	4	5	6.5
6.5	PIPO, PUTR2, FEID, CEVE	10-40%	25	35	45.5	PIPO, PUTR2, FEID, CEVE	10-40%	32	45	58.5	PIPO, PUTR2, FEID	41-80%	4	5	6.5
6.5	PIPO, PSME, LAOC, ABGR	11-40%	21	30	39	PIPO, PSME, LAOC, ABGR	11-40%	32	45	58.5	PIPO, PSME, ABGR, LAOC	41-100%	7	10	13
52	PIPO, LAOC, PSME, ABGR	0-50%	7	10	13	PSME, PIPO, LAOC, ABGR	0-50%	7	10	13	ABGR, PSME, PIPO, LAOC	51-100%	18	25	32.5
71.5	PICO, LUPIN, RICE	0-40%	14	20	26										
26	PIAL, ABLA, VASC, POPU3	21-50%	39	55	71.5										
26	PICO, ABLA, PIEN	11-30%	28	40	52	ABLA, PIEN, PICO, VASC	11-40%	18	25	32.5	ABLA, PIEN, PICO, VASC	41-70%	7	10	13

BPS #	Name	Fire Regime	Average Fire Size	Class A Dominant Species	Class A Canopy Cover	% Low ARV	% Mid ARV	% High ARV	Class B Dominant Species	Class B Canopy Cover	% Low ARV	% Mid ARV
91056	PNW Subalpine Wet-Mesic Spruce Forest	4	1000	CHAN9, SASC, VAME, PICO	0-100%	11	15	19.5	ABLA2, PIEN, PSME, ABGR	0-100%	14	20
810610	Inter-Mountain Basins Aspen-Mixed Conifer Forest and Woodland	2	10	POTR5, SYOR2, RIBES	0-99%	10	14	18.2	POTR, SYOR2, RIBES	40-100%	28	40
81153	Inter-Mt. Basins Greasewood Flat	5	1	LECI4, SPAI, SAVE4	0-20%	4	5	6.5	SAVE4, DISTI, SPAI, LECI4	0-30%	67	95
81154	Inter-Mountain Basins Montane Riparian Systems	5	100	POPUL, SALIX, ALNUS, CAREX	0-80%	18	25	32.5	POPUL, ALNUS, SALIX	21%-100	46	65
00001	Riparian Systems	3 to 5	100	POPUL, SALIX, ALNUS, CAREX	0-100%	18	25	32.5	POPUL, ALNUS, SALIX	(0-21)-100%	42	60
81159	Rocky Mt. Montane Riparian System	3	100	POPUL, SALIX, ALNUS, CAREX	0-100%	21	30	39	POPUL, SALIX	0-100%	35	50
91160	Rocky Mt. Subalpine/ Upper Montane Riparian Systems	3	10	SALIX, CAREX, PICEA	0-100%	35	50	65	SALIX, CAREX, PICEA	0-100%	35	50
91143	Rocky Mountain Alpine Fell-Field	5	1	SIAC, TRNA2, FEBR	0-20%	4	5	6.5	SIAC, TRNA2, FEBR	21-50%	67	95
911350	IMB Semi-Desert Grassland	4	250	ARTR2, HECO2, ACHY	21-40%	14	20	26	ARTR2, HECO2, ACHY	0-30%	56	80
911400	NRM Subalpine - Upper Montane Grassland	5	No Data	FEVI, LUPIN, JUPA, ACOCO	11-40%	1	1	1.3	FEVI, LUPIN, JUPA, ACOCO	41-90%	56	80
911240	CP Low Sagebrush Steppe	4	No Data	PSSP6, POSE, LOMA, EPPA	0-30%	7	10	13	PSSP6, POSE, LOMA, ARAR8	1-10%	28	40
911450	RM Subalpine-Montane Mesic Meadow	4	50	ERIGE2, LUPIN, DECA	0-100%	4	5	6.5	ERIGE2, LUPIN, DECA	0-100%	32	45

% High ARV	Class C Dominant Species	Class C Canopy Cover	% Low ARV	% Mid ARV	% High ARV	Class D Dominant Species	Class D Canopy Cover	% Low ARV	% Mid ARV	% High ARV	Class E Dominant Species	Class E Canopy Cover	% Low ARV	% Mid ARV	% High ARV
26	PICO, LIBO3, VAME, VASC	0-100%	25	35	45.5	PICO, LIBO3, VAME, VASC	0-100%	14	20	26	ABLA, PIEN, CLUN2, VAME	0-100%	7	10	13
52	POTR, SYOR2, RIBES	40-100%	25	35	45.5	POTR, ABCO, ABLA,	0-40%	7	10	13	ABLA, ABCO, POTR,	40-80%	1	1	1.3
100	SAVE4, DISTI, SPAI, LEIC4	0.00%													
84.5	POPUL, ALNUS, SALIX	21-100%	7	10	13										
78	POPUL, PINUS, ALNUS, SALIX	(0-21)-100%	11	15	19.5										
65	POPUL, PINUS, SALIX	0-100%	14	20	26										
65															
100															
100															
100	ABLA, PIAL, FEVI, ARAC2	21-70%	13	19	24.7										
52	ARAR8, PSSP6, POSE, LOMA	11-30%	35	50	65										
58.5	ASTER, LUPIN, ROWO, RIBES	0-10%	35	50	65										

Appendix F: Comparison of Current Vegetation Conditions to the Acceptable Range of Variability

Grassland	Shrubland	Juniper Woodland	Forestland	Riparian
Rangeland				

BPS	Seral Class	Plan Area Deficit Acres	Plan Area Surplus Acres	BLM Deficit Acres	BLM Surplus Acres	% of BpS in Priority Areas	Probable Treatment Type
IMB Semi-Desert Grassland	A		3897		1498	15.9	RX Fire/Seeding
	B	-498997		-6686			
	U		723619		18343		
CP Steppe & Grassland	B	-229518				0.0	RX Fire/Seeding
	C	-253465		-362			
	U		1238143		5295		
NRM Subalpine - Upper Montane Grassland	A	-124				0.0	RX Fire/Seeding
	B			-2888			
	C	-1977		-686			
	U		3780				
CP Low Sagebrush Steppe	A		119974		3517	23.7	RX Fire/Seeding
	B	-166343		-3006			
	C	-169500		-3013			
	U		358448		6719		
CP Scabland Shrubland	A		224084		2869	2.8	RX Fire/ Mechanical/ Seeding
	B	-15875		-224			
	C	-295167		-3771			
	U		219455		2554		
Stiff & Low Sagebrush w/ Trees	A		365464		2202	26.1	RX Fire/ Mechanical/ Seeding
	B	-566397		-16418			
	C			-473			
	D		3790	-630			
	U		323110		2138		
IMB Big Sagebrush Shrubland	A		295240		15256	3.1	RX Fire/ Mechanical/ Seeding
	B	-575177		-20849			
	C	-641393		-24700			
	U		1394826		28822		

Grassland	Shrubland	Juniper Woodland	Forestland	Riparian
Rangeland				

BPS	Seral Class	Plan Area Deficit Acres	Plan Area Surplus Acres	BLM Deficit Acres	BLM Surplus Acres	% of BpS in Priority Areas	Probable Treatment Type
Wyoming Big Sagebrush Semi-Desert w/ Trees	A		546751		14677	0.0	RX Fire / Mechanical / Seeding
	B	-2588703		-34566			
	C	-531495					
	D		1143557		38618		
	E		285440		18280		
	U		2323975		17147		
Mountain Big Sagebrush w/ Conifers	A		111465			50.0	RX Fire / Mechanical / Seeding
	B	-386582		-4736			
	C	-675					
	D		120132		3745		
	E		193812		5168		
	U		64666		287		
IMB Mountain. Mahogany Woodland and Shrubland	A		16252		18	0.0	RX Fire / Mechanical / Seeding
	B	-6434		-273			
	D			-86			
	U		1545		41		
IMB Greasewood Flat Seral	A		603		22	27.2	RX Fire / Mechanical / Seeding
	B	-2202		-502	9		
	U		2563		37		
Juniper Steppe Woodland	A		28050		877	33.4	Mechanical / RX Fire / Seeding
	B	-11255		-293			
	D	-67226		-3098			
	E		23313				
	U		18605		351		
NRM Ponderosa Pine Woodland - Xeric	A			-197		42.0	Mechanical / RX Fire
	B		258475		3111		
	C	-79527		-1088			
	D	-211431		-5347			
	E		215375		160		
	U		5759		29		
NRM Ponderosa Pine Woodland - Mesic	A				1772	32.5	Mechanical / RX Fire
	B		1190315		9844		
	C	-722343		-3301			
	D	-1110425		-6311			
	E		1299283		5230		
	U		14120		90		

Grassland	Shrubland	Juniper Woodland	Forestland	Riparian
Rangeland				

BPS	Seral Class	Plan Area Deficit Acres	Plan Area Surplus Acres	BLM Deficit Acres	BLM Surplus Acres	% of BpS in Priority Areas	Probable Treatment Type
NRM Dry-Mesic Montane Mixed Conifer Forest	A		33369		37	0.0	Mechanical/ RX Fire
	B		1971674		6661		
	C	-1625468		-4597			
	D	-2424037		-6026			
	E		3211852		18669		
	U		12998		67		
NRM W. Hemlock - W. Red Cedar Forest	A			-40		0.0	Mechanical/ RX Fire
	B			-226			
	C	-39788		-89			
	D	-35584					
	E		100501				
	U		125				
IMB Aspen-Mixed Conifer Forest and Woodland	A			-169		66.8	Mechanical/ RX Fire
	B	-235613		-1550			
	C	-208005		-1406			
	D				1157		
	E		606431		3724		
	U		12267		42		
RM Poor Site Lodgepole Pine Forest	A	-17249		-64		46.8	Mechanical/ RX Fire
	B	-47885		-175			
	C	-17491		-64			
	U		120199		454		
NRM Subalpine Dry Woodland & Parkland	A		15390			0.0	Mechanical
	B			-1			
	C	-12782		-7			
	U		1163				
RM Subalpine Dry-Mesic Spruce Forest	A		56900		3	21.9	Mechanical
	B		74733		7		
	C	-121794		-2			
	D	-74290		-1			
	E		97952		5		
	U		6686				

Grassland	Shrubland	Juniper Woodland	Forestland	Riparian
Rangeland				

BPS	Seral Class	Plan Area Deficit Acres	Plan Area Surplus Acres	BLM Deficit Acres	BLM Surplus Acres	% of BpS in Priority Areas	Probable Treatment Type
RM Subalpine Wet-Mesic Spruce Forest	A		3261			28.6	Mechanical
	B		4582	-3			
	C	-38874		-8			
	D		20811	-4			
	E			-1			
	U		1652				
IMB Montane Riparian Systems	A	-121168		-353		0.0	Mechanical\ Rx Fire
	B	-377346		-2816			
	C		466215		2858		
	U		236584		1442		
Riparian Systems	A		27197		647	23.0	Mechanical\ Rx Fire
	B	-20638		-88			
	C	-4427					
	U		10473		234		
RM Montane Riparian Systems	A	-172232		-986		0.0	Mechanical\ Rx Fire
	B	-313359		-2053			
	C		358017		3529		
	U		291242		846		
RM Subalpine-Montane Mesic Meadow	A		8430		530	40.4	Mechanical\ Rx Fire
	B	-21806		-338			
	C	-24158		-422			
	U		56225				
RM Subalpine/Upper Montane Riparian Systems	A				55	34.3	Mechanical\ Rx Fire
	B	-66215					
	U		77536		74		

Appendix G: Desired Conditions for Stream Channel Restoration

Desired Condition - Streambank Stability

Minimum Percent Cover[1] by Capability Groups		
Percent Stream Gradient	**Substrate Classes**	**Percent of greenline represented by late seral community types or anchored rocks/logs**
Less than 0.5%	Gravel, Cobble, or consolidated[2] Silt, Clay or Sand	98% +
	Non-consolidated Silt, Clay or Sand	90% +
0.5 to 2.0%	Gravel, Cobble, or consolidated Silt, Clay or Sand	90% +
	Non-consolidated Silt, Clay or Sand	85% +
2.0 to 4.0%	Gravel, Cobble, or consolidated Silt, Clay or Sand	85% +
	Non-consolidated Silt, Clay or Sand	80% +
4.0 to 10%	Non-consolidated Silt, Clay or Sand	80% +
	Gravel or consolidated Silt, Clay or Sand	85% +
10% +	Bedrock	98% +

[1]Minimum percent cover is used as a measure of streambank stability. Adapted from Winward, 2000. Values are intended as a starting point for discussions of restoration projects. Inter-Disciplinary (ID) teams decide final design of site.

[2] Consolidated material refers to situations where at least one major soil horizon within the rooting zone consists of strongly compacted, cohesive, or cemented particles.

Desired Condition - Width to Depth Ratios

		Entrenchment greater than 1.4 and:	
Gradient %	**Entrenchment less than 1.4**	**Columbia Plateau**	**Blue Mountains**
0-0.5	5-10	4 x Drainage Area (sq. miles)$^{0.27}$	15.4 x Drainage Area (sq. miles)$^{0.09}$
0.5+	3-12		

This table was initiated with data from local ODFW stream surveys and then ratios were reduced based on regional rating curves from Castro, 1997. Values are not intended as targets, just starting point for discussions of restoration projects. Inter-Disciplinary (ID) teams decide final design.

Desired Condition - Percent Pools

% Gradient	Precipitation (inches)						
	7-9	9-14	14-16	16-25	25-40	40-60	60-80
0-0.5	40-70				30-60	30-60	30-60
0.5-2	30-50	20-40		40-60			
2-4	20-30	20-30		20-40	20-50	20-40	30-50
4+	10-20	10 to 20	20 to 30		30-40	20-30	10-20

LWD very important	=LWD forms approximately two thirds of pools	These ranges were generated from local ODFW stream surveys, studies of Eastern Oregon LWD, old GLO land survey notes from 1800s, and several studies on the increase in pools resulting from increases in LWD (approx 50%). Values are not intended as targets, just starting point for discussions of restoration projects. Inter-Disciplinary (ID) teams decide final design of site specific restoration of pools and large wood.
LWD important	=LWD forms approximately half of pools	
LWD less important	=LWD forms less than half of pools	

Desired Condition - Residual pool depth as % of Reach Bankfull Width

% Gradient	Precipitation (inches)			
	7-14	14-25	25-35	35+
0-0.5	2+%	3+%	4+%	5+%
0.5-2	2+%	4+%	5+%	7+%
2-4	4+%	5+%	7+%	8+%
4+	6%+	7%+	9%+	10%+

These ranges were generated from local ODFW stream surveys, studies of Eastern Oregon LWD, old GLO land survey notes from 1800s, and several studies on the increase in pools resulting from increases in LWD (approx 50%). Values are **not intended** as **targets**, just as starting points for restoration projects. Inter-Disciplinary (ID) team discussion guides site specific implementation of restoration work to restore pools and large wood.

Appendix H: Special Status Wildlife

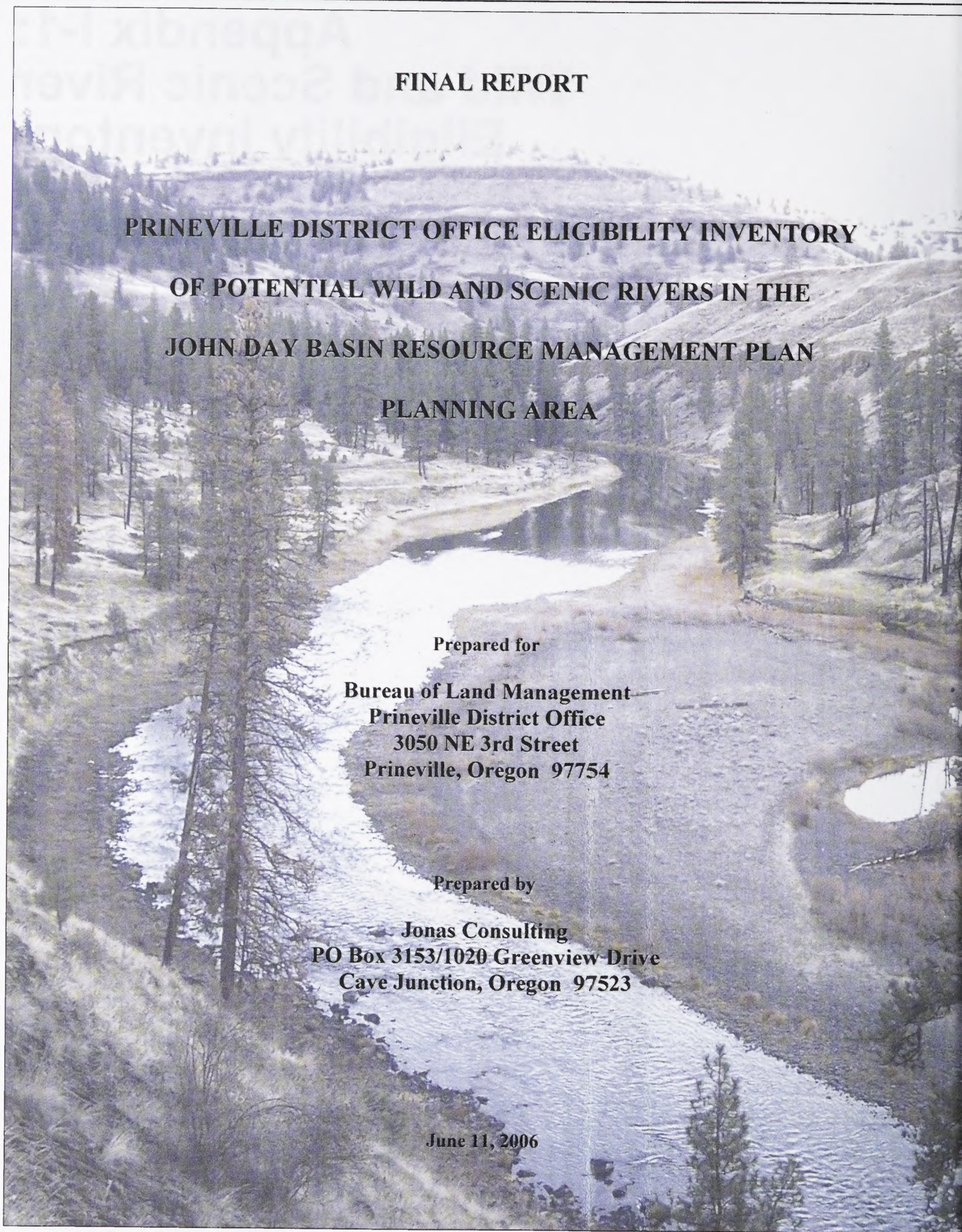
Species	Scientific Name	Planning Area Occurrence	General Habitat Description (Csuti 1997)
Federally Listed Species			
Canada Lynx (T)	*Lynx canadensis*	Suspected – dispersal only	Dense boreal forests that have openings such as meadows, bogs, or rock outcroppings. 14 sq. mile home range. Den under logs, hollow trees, under thick brush.
Sensitive Species			
Mammals			
California Wolverine	*Gulo gulo*	Suspected – dispersal only	Open forests at higher elevations in alpine areas. Will cross clear-cuts, but avoids young, dense regenerating forests or brushy areas.
Fisher	*Martes pennanti*	Suspected	Mature closed canopy coniferous forests w/ some deciduous component. May travel 50 miles in 3 days. Den in hollow logs, brush piles, or rocks.
Pallid Bat	*Antrozous pallidus*	Suspected	Arid regions or open forests with p pine or oak. Uses desert vegetation (sagebrush, juniper, salt desert shrub). Cliff-faces, caves, mines or buildings. Forages on ground – crickets, beetles, grasshoppers, scorpions, mice, and lizards.
Pygmy Rabbit	*Bachylagus idahoensis*	Documented	Tall dense clumps of Great Basin sagebrush or greasewood. Deep friable soils to burrow.
Spotted Bat	*Euderma maculatum*	Documented	Variety of habitats from p pine to desert water holes. Crevices in cliffs used for reproduction are more important than veg. type. Eats moths.
Townsend's Big-eared Bat	*Corynorhinus townsendii*	Documented	Pacific coast east to Great Plains including arid eastern OR. The presence of suitable roost sites is more important than veg. Roosts in buildings, caves, mines, and bridges. Feed on moths.
Washington Ground Squirrel	*Spermophilus washingtoni*	Documented	Arid deserts & grasslands, most freq. in sagebrush or grasslands associated w/ river banks, hillsides, or ravines.
Birds			
American Peregrine Falcon	*Falco peregrinus anatum*	Documented	Suitable nest is most critical: cliffs, overlooking fairly open areas with ample food. Usually nest near where waterbirds are plentiful. Home range – 25 to 100 sq. miles.

Species	Scientific Name	Planning Area Occurrence	General Habitat Description (Csuti 1997)
American White Pelican	*Pelecanus erythrorhynchos*	Unknown	Inland lakes and marshes during breeding season. A predator-free island is required for nesting. Almost any water body outside of breeding season.
Black Swift	*Cypseloides niger*	Unlikely	Cliff faces near or behind waterfalls – usually in deep canyons in wooded areas.
Bobolink	*Dolichonyx oryzivorus*	Unknown	Open prairies, grasslands, wet meadows, pastures, irrigated hay meadows, and grain crops.
Bufflehead	*Bucephala albeola*	Unknown	Nests near mountain lakes surrounded by open woodlands containing snags. Preferred nest trees: aspen, p pine, and doug fir. After breeding season found on open water or major rivers and that coast.
Grasshopper Sparrow	*Ammodramus savannarum*	Suspected	Short grasslands with occasional shrubs < 35% CC. Prefer native bunch grasses on north slopes of hills with scattered shrubs. Use cultivated grasslands and pastures. 1-4 ac. territory.
Greater Sage Grouse	*Centrocercus urophasianus*	Documented	Areas dominated by big sagebrush with cover 15 to 50%. Males use open areas as leks.
Lewis' Woodpecker	*Melanerpes lewis*	Documented	Open forests at lower elevation, white oak-pine, p pine, and cottonwood riparian woodlands in river valleys. 15 ac. territory. Eat berries and nuts in fall. Uses other WP holes.
Northern Bald Eagle	*Haliaeetus leucocephalus*	Documented	Rivers, lakes, & marshes with nearby tall trees or cliffs for nesting. Nests are usually 1 mile apart. May travel 10 miles from roost to forage. Nest in large tall tree within ½ m. of water.
Northern Waterthrush	*Seiurus noveboracensis*	Unknown	Riparian thickets in forests, near rapidly flowing water. Occasionally uses dense vegetation at the edges of lakes.
Tricolored Blackbird (breeding pop.)	*Agelaius tricolor*	Documented	Breeds in freshwater marshes with cattails or thickets of willows or shrubs. High elevation habitat use is unlikely.
Trumpeter Swan	*Cygnus buccinators*	Unknown	Freshwater cattail and bulrush marshes. Nests on the shores of large inland lakes and marshes.

Species	Scientific Name	Planning Area Occurrence	General Habitat Description (Csuti 1997)
Upland Sandpiper	*Bartramia longicauda*	Suspected	Nests in partially flooded meadows and grasslands, usually with a fringe of trees, and often in the middle of high-elevation sagebrush. Meadows are little grazed and have forbs. Perches in trees/ snags surrounding the nest site.
White-headed Woodpecker	*Picoides albolarvatus*	Documented	Closely associated with P pine & mixed conifer with p pine. Requires large trees >20"dbh, 250 – 500 ac. home range. Nest on edge of a clearing.
Yellow-billed Cuckoo	*Coccyzus americanus*	Documented Historically	Thick closed-canopy riparian forest with an understory of dense brush. Willow, black cottonwoods along rivers of E. OR Patches must be > 37 ac. in size with >7 ac. of closed canopy. Feed primarily amount cottonwoods.
Yellow Rail	*Coturnicops novebroacensis*	Suspected	Freshwater marshes & wet meadows w/ sedges, usually surrounded by willow, standing water up to 1' during breeding.
Amphibians and Reptiles	General Habitat Description (Corkran and Thom, 2006)		
Columbia Spotted Frog	*Rana luteiventris*	Documented	Marshes, permanent ponds, lake edges and slow streams, usually where there is abundant aquatic vegetation. Breed in very shallow water.
Cope's Giant Salamander	*Dicamptondon copei*	Unlikely	Small, steep-gradient, permanent streams with clear, cold water. Streambeds composed of large gravel to small boulders with some large logs, has no silt. Large logs and rock along the stream bed.
Invertebrates			
Dalles Juga	*Juga hemphillii dalliensis*	Unlikely	Found in large springs and medium sized creeks at low elevations. Needs highly oxygenated, cold and fast flowing water. Water cress (Rorippa sp). is present at most sites. Little or no epiphytic algae and few other macrophytes.
Deschutes Mountain snail	*Oreohelix variabilis nov.*	Documented	Talus piles on northern aspects on the Oregon side of the Columbia gorge. The talus is often associated with springs although it usually occupies only the margins of those springs.
Deschutes Sideband	*Monadenia fidelis nov.*	Unlikely	Not well defined at this time.

Species	Scientific Name	Planning Area Occurrence	General Habitat Description (Csuti 1997)
Meadow fritillary	*Boloria Bellona*	Suspected	Usually wet places marshes, wet aspen groves. Favorite nectar sources are composites, including black-eyed susans, dandelions, and ox-eyed daisy. Plants from other families, such as verbena and dogbane, are visited less often.
Purple-lipped Juga	*Juga hemphillii maupensis*	Unlikely	Found in large streams with gravel/ cobble riffles. Needs well oxygenated water. omewhat tolerant of siltation and slack water. Found with other more widely distributed species of snails. Little or no epiphytic algae or macrophytes are found at the sites.
Silver-bordered fritillary	*Boloria selene*	Suspected	Wet meadows, bogs, marshes. Favorite nectar sources are composite flowers, including goldenrod and black-eyed susans.

Appendix I-1: Wild and Scenic River Eligibility Inventory



FINAL REPORT

PRINEVILLE DISTRICT OFFICE ELIGIBILITY INVENTORY OF POTENTIAL WILD AND SCENIC RIVERS IN THE JOHN DAY BASIN RESOURCE MANAGEMENT PLAN PLANNING AREA

Prepared for

Bureau of Land Management
Prineville District Office
3050 NE 3rd Street
Prineville, Oregon 97754

Prepared by

Jonas Consulting
PO Box 3153/1020 Greenview Drive
Cave Junction, Oregon 97523

June 11, 2006

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* This report only presents recommendations for Wild and Scenic Rivers eligibility and does not make final eligibility determinations.

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PRINEVILLE DISTRICT OFFICE ELIGIBILITY INVENTORY OF POTENTIAL WILD AND SCENIC RIVERS IN THE JOHN DAY BASIN RESOURCE MANAGEMENT PLAN PLANNING AREA

I. INTRODUCTION

As part of the planning effort for development of the John Day Basin Resource Management Plan (RMP), the Bureau of Land Management (BLM) Interdisciplinary (ID) Team initiated a Wild and Scenic Rivers (WSR) inventory of approximately 1,400 miles of waterways within the John Day Basin RMP planning area. This inventory was to determine if any of these waterways that flow through public lands meet the WSR eligibility criteria as identified in the WSR Act of 1968, as amended.

A. PUBLIC INVOLVEMENT AND COORDINATION

The results of this WSR eligibility inventory will be included in the Prineville RMP planning effort. The public will be given the opportunity to comment on the WSR eligibility inventory results during the normal planning process for the RMP planning effort. Concerns voiced by the public will be included in deciding if those waterways recommended eligible in this report are also suitable to be recommended to Congress for inclusion into the WSR National System.

II. PROCESS

The following definitions apply to key terms used in the WSR eligibility inventory process.

- **River (or waterway)**: A flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes. For purposes of this review, a river is not required to have water in it year-round as long as flows are regular and predictable, even though intermittent, seasonal, or interrupted (BLM 2004).

- **Public lands**: The BLM-administered public land surface along waterways within a planning area. Those "split estate lands," where the land surface is state or privately owned and the federal mineral estate is administered by the BLM, are not involved with these reviews. This study involves the review of public lands; data on segments, parcels, corridors, rivers, and waterways were collected on public lands only, and are the basis for this review.

This WSR eligibility inventory of waterways in the John Day RMP planning area entails a three-step process:

1. Evaluate each river segment in the study area to recommend whether or not it is eligible for inclusion into the national WSR system;

2. Tentatively classify each segment recommended eligible as either wild, scenic, or recreational;

3. Identify and make recommendations for interim protection.

The subsequent step in the process, determining if any of those public lands that meet the eligibility criteria also meet WSR suitability factors, is not addressed in this report.

STEPS I & II: WILD AND SCENIC RIVERS ELIGIBILITY CRITERIA REVIEW AND TENTATIVE CLASSIFICATION

Eligibility Criteria

To meet the eligibility criteria, a waterway must be "free-flowing" and, along with its adjacent land area, must possess one or more "outstandingly remarkable" values. Only those portions of waterways flowing through public lands are to be considered. The following are the guidelines used in applying the eligibility criteria:

- **Free-flowing**: As applied to any river or section of a river, free-flowing means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national WSR system shall not automatically bar its consideration for such inclusion; *provided*, that this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national WSR system (WSR Act Sec. 16(b)).

  A river need not be "boatable or floatable" in order to be eligible as long as the volume of flow is sufficient enough to maintain the outstandingly remarkable values identified within the segment (BLM 1993). In addition, flows need not to be permanent but can be intermittent, seasonal, or interrupted, as long as they are regular and predictable and derived from naturally occurring circumstances (BLM 2004).

- **Outstandingly Remarkable Values**: The public lands along waterways must also possess one or more outstandingly remarkable values to be eligible for further consideration. Outstandingly remarkable values relate to scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar resource values.

In order to be assessed as outstandingly remarkable, a river-related value must be "a unique, rare or exemplary feature that is significant at a comparative regional or national scale," that is, such a value "would be one that is a conspicuous example from among a number of similar values that are themselves uncommon or extraordinary" (USFS and NPS 1999, p. 13). In addition, all such values should be directly river related. That is, they should be located in the river or on its immediate shorelands (generally within one-quarter mile on either side of the river); contribute substantially to

the functioning of the river ecosystem; and/or owe their location or existence to the presence of the river.

The following criteria for outstandingly remarkable values were used in assessing waterways in the John Day Basin RMP planning area:

- **Scenic**: The landscape elements of landform, vegetation, water, color and related factors result in notable or exemplary visual features and/or attractions within the geographic region. When analyzing scenic values, additional factors such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed may be considered. Scenery and visual attractions may be highly diverse over the majority of the river or river segment and not common to other rivers in the geographic region.

- **Recreational**: Recreational opportunities are or have the potential to be unusual enough to attract visitors to the geographic region. Visitors are willing to travel long distances to use the river resources for recreational purposes. River-related opportunities could include, but are not limited to, sightseeing, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. Interpretive opportunities may be exceptional and attract or have the potential to attract visitors from outside the geographic region. The river may provide or have the potential to provide settings for national or regional commercial usage or competitive events. In addition, the river may be eligible if it is determined to provide a critically important regional recreation opportunity, or be a significant component of a regional recreation opportunity spectrum setting.

- **Geologic**: The river or the area within the river corridor contains one or more example(s) of a geologic feature, process, or phenomenon that is unique or rare within the region of comparison. The feature(s) may be in an unusually active stage of development, represent a "textbook" example, and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial, or other geologic structures).

- **Fish**: Fish values may be judged on the relative merits of either fish populations, habitat, or a combination of these river-related conditions:

  a **Populations**. The river is nationally or regionally one of the top producers of resident, indigenous, and/or anadromous fish species. Of particular significance may be the presence of wild stocks or unique stocks, or populations of state, federally listed, or candidate threatened and endangered species.

  b **Habitat**. The river provides exceptionally high quality habitat for fish species indigenous to the region. Of particular significance is habitat for state, federally listed, or candidate threatened and endangered species.

- **Wildlife**: Wildlife values may be judged on the relative merits of either wildlife populations or habitat, or a combination of these conditions:

  a **Populations**. The river or area within the river corridor contains nationally or regionally important populations of resident or indigenous wildlife species dependent on the river environment. Of particular significance may be species considered to be unique or populations of state, federally listed, or candidate threatened or endangered species.

  b **Habitat**. The river, or area within the river corridor, provides exceptionally high quality habitat for wildlife of national or regional significance, and/or may provide unique habitat or a critical link in habitat conditions for state, federally listed, or candidate threatened or endangered species. Contiguous habitat conditions are such that the biological needs of the species are met.

- **Cultural**: The river, or area within the river corridor, contains a site(s) where there is evidence of occupation or use by Native Americans. Sites must be rare, have unusual characteristics, or exceptional human interest value(s). Sites may have national or regional importance for interpreting prehistory; may be rare; may represent an area where a culture or cultural period was first identified and described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for rare sacred purposes.

- **Historic**: The river or area within the river corridor contains a site(s) or feature(s) associated with a significant event, an important person, or a cultural activity of the past that was rare or unusual in the region. A historic site(s) and/or features(s) in most cases is 50 years old or older. Sites or features listed in, or eligible for inclusion in, the National Register of Historic Places, may be of particular significance.

- **Other Similar Values**: While no specific national evaluation guidelines have been developed for the ▪other similar values• category, additional values deemed relevant to the eligibility of the river segment should be considered in a manner consistent with the foregoing guidance -- including, but not limited to, hydrology, ecologic/biologic diversity, paleontology, botanic, and scientific study opportunities.

Tentative Classification

At the same time that eligibility recommendations are made, rivers that meet the eligibility criteria are also given a tentative classification (either wild, scenic, or recreational), as required by the WSR Act. Tentative classification is based on the type and degree of human developments associated with waterway and adjacent lands as they exist at the time of the review. This classification, however, is a planning recommendation and is tentative to Congressional legislative determination.

The tentative classifications are further defined as follows:

- **Wild River Area**: Wild river areas are those where the rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America. Wild means undeveloped; roads, dams, or diversion works are generally absent from a one-quarter mile corridor on both sides of the river.

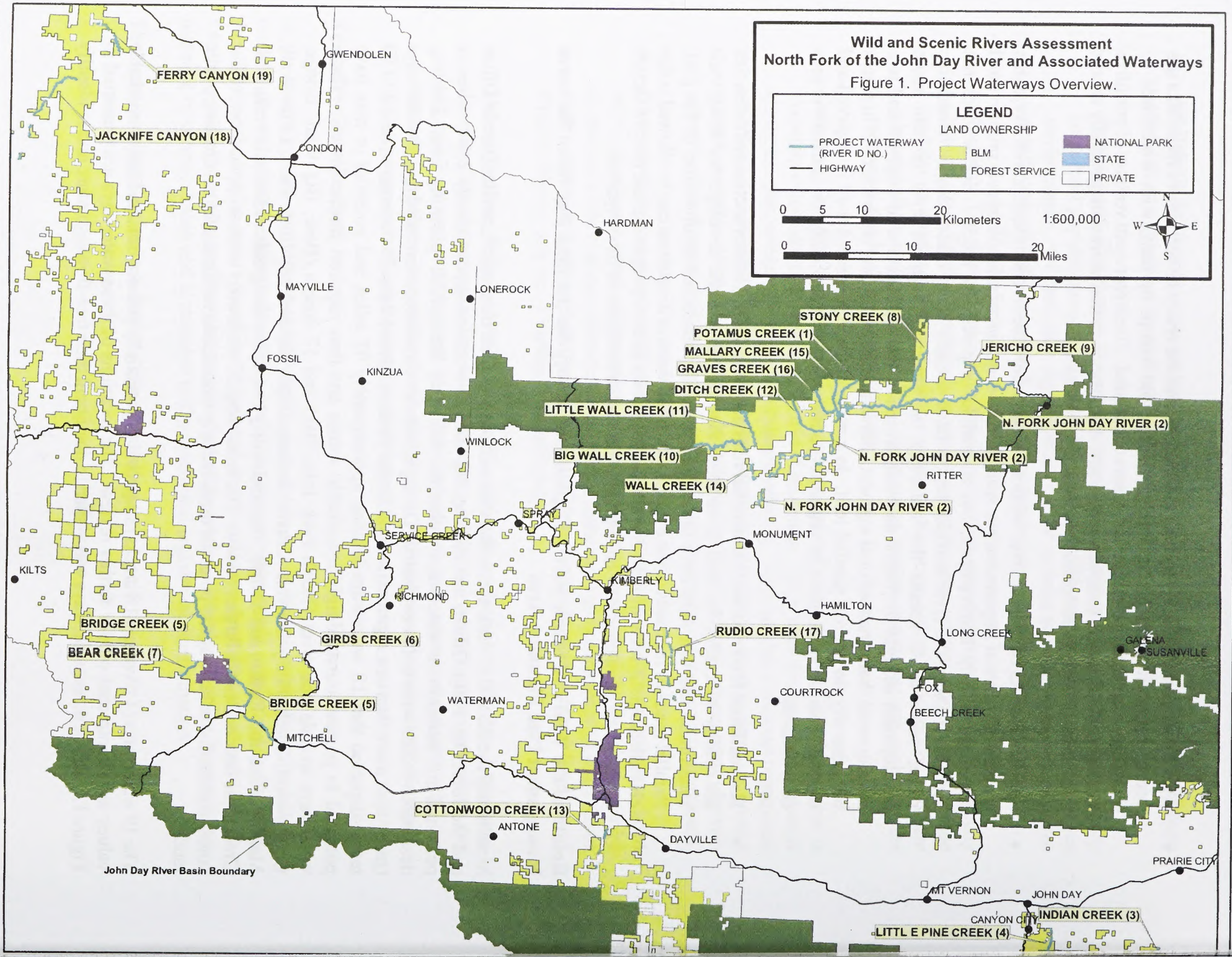
- **Scenic River Area**: Scenic river areas are those where the rivers or sections of rivers that are generally free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. Scenic does not necessarily mean the river corridor has to have scenery as an outstandingly remarkable value; however, it means the waterway or waterway segment may contain more development (except for major dams or diversion works) than a wild segment and less development than a recreational segment. For example, roads may cross the river in places but generally do not run parallel to it. In certain cases, if a parallel road is unpaved and well-screened from the river by vegetation, a hill, etc., it could qualify for scenic river area classification.

- **Recreational River Area**: Recreational river areas are those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. Parallel roads or railroads or the existence of small dams or diversions can be allowed in this classification. A recreational river area classification does not imply that the river or section of river will be managed or have priority for recreational use or development.

Results of the Wild and Scenic Rivers Eligibility Inventory for the John Day Basin Resource Management Plan Planning Area

Members of the BLM ID Team, consisting of resource specialists from the Prineville District Office and the John Day Field Office, met on May 20, 2005 to examine approximately 1,400 miles of perennial and intermittent waterways within the John Day Basin RMP planning area. Existing designated WSRs were not re-evaluated. During this review, it was recommended that 39 waterways (many with more than one segment) needed further review. Out of these 39 waterways, the BLM ID team suspected that 18 waterways totaling approximately 93 miles had potential or may have potential to possess outstandingly remarkable values and thus required further review. These waterways include one river (North Fork John Day) and 17 creeks (Bear, Big Wall, Bridge, Cottonwood, Ditch, Ferry Canyon, Graves, Indian, Jackknife, Jericho, Little Pine, Little Wall, Mallory, Potamus, Rudio, and Stony). Approximately two miles along one additional creek, Wall Creek, was later added for further review. The remaining 20 waterways were dropped from further consideration due to lacking the potential outstandingly remarkable values and/or not crossing public lands.

The 19 waterways (1 river and 18 creeks) suspected to potentially possess outstandingly remarkable values were contracted out for further review. The locations of these waterways are presented in Figure 1. Each of these waterways was visited to document their free-flowing nature and to identify


Wild and Scenic Rivers Assessment
North Fork of the John Day River and Associated Waterways
Figure 1. Project Waterways Overview.
LEGEND
LAND OWNERSHIP
PROJECT WATERWAY (RIVER ID NO.)
HIGHWAY
BLM
FOREST SERVICE
NATIONAL PARK
STATE
PRIVATE
0 5 10 20 Kilometers
1:600,000
0 5 10 20 Miles
N
W
E
S
FERRY CANYON (19)
JACKNIFE CANYON (18)
GWENDOLEN
CONDON
HARDMAN
MAYVILLE
LONEROCK
FOSSIL
KINZUA
WINLOCK
SPRAY
SERVICE CREEK
KILTS
RICHMOND
KIMBERLY
MONUMENT
RITTER
HAMILTON
LONG CREEK
GALENA
SUSANVILLE
FOX
BEECH CREEK
COURTROCK
WATERMAN
MITCHELL
ANTONE
DAYVILLE
PRAIRIE CITY
MT VERNON
JOHN DAY
CANYON CITY
STONY CREEK (8)
POTAMUS CREEK (1)
MALLARY CREEK (15)
GRAVES CREEK (16)
DITCH CREEK (12)
LITTLE WALL CREEK (11)
BIG WALL CREEK (10)
WALL CREEK (14)
JERICHO CREEK (9)
N. FORK JOHN DAY RIVER (2)
N. FORK JOHN DAY RIVER (2)
N. FORK JOHN DAY RIVER (2)
BRIDGE CREEK (5)
GIRDS CREEK (6)
BEAR CREEK (7)
BRIDGE CREEK (5)
RUDIO CREEK (17)
COTTONWOOD CREEK (13)
INDIAN CREEK (3)
LITTL E PINE CREEK (4)
John Day River Basin Boundary

existing outstandingly remarkable values, where possible. Data were gathered only on those waterway segments that cross public lands; that is, no private, state, or other federal lands were reviewed. Fieldwork was conducted between October 2005 and March 2006. Digital photos were taken and GPS referenced as part of the documentation process. Existing pertinent data from state, federal, and local sources were also reviewed to substantiate or refute the existence of outstandingly remarkable values. Finally, BLM staff at the Prineville District Office and the John Day Field Office was consulted for their expertise on specific river-related values along the 19 studied waterways.

Eighteen of the 19 waterways with potential to possess outstandingly remarkable values (Bear, Big Wall, Bridge, Cottonwood, Ditch, Ferry Canyon, Graves, Indian, Jackknife Canyon, Jericho, Little Pine, Little Wall, Mallory, Potamus, Rudio, and Stony creeks) were found not to meet the WSR eligibility criteria and dropped from further consideration. Table 1 below summarizes these findings. One River (North Fork John Day) was identified as possessing outstandingly remarkable values and is thus recommended as eligible.

Table 1. Summary of the John Day Basin RMP Planning Area WSR Potential Eligibility Review

River/Stream (Waterway) Reviewed	Free-flowing	Estimated Flows During Study Period*	Outstandingly Remarkable Values on BLM Lands	BLM Lands Recommended
North Fork John Day River	***Yes***	***197, 205, & 207 cfs***	***Scenic Recreational Fish***	***Yes***
Bear Creek	Yes	0-3 cfs	None	No
Big Wall Creek	Yes	15 cfs	None	No
Bridge Creek	Yes	15-18 cfs	None	No
Cottonwood Creek	Yes	2-3 cfs	None	No
Ditch Creek	Yes	4-8 cfs	None	No
Ferry Canyon Creek	Yes	7-10 cfs	None	No
Girds Creek	Yes	0	None	No
Graves Creek	Yes	1-7 cfs	None	No
Indian Creek	Yes	7-10 cfs	None	No
Jackknife Canyon Creek	Yes	5-10 cfs	None	No
Jericho Creek	Yes	0-3 cfs	None	No
Little Pine Creek	No	0-5 cfs	None	No
Little Wall Creek	Yes	15 cfs	None	No
Mallory Creek	Yes	2-12 cfs	None	No
Potamus Creek	Yes	7-10 cfs	None	No
Rudio Creek	Yes	0-10 cfs	None	No
Stony Creek	Yes	0-10 cfs	None	No

*Flows are measured in cubic feet per second (cfs). These measurements are based on estimates made during field work, with the exception of the North Fork John Day where flows were taken from the USGS gauge in Monument, Oregon. Flows often varied along different waterway segments, with some waterways experiencing no flows along some segments but steady flows along other segments.

Attachment A (WSR Outstandingly Remarkable Value Summary Table) provides details on scenic, fisheries, recreation, wildlife, historical, geologic, cultural, and similar values for all 19 waterways,

and identifies why such values were or were not considered outstandingly remarkable. Attachment A also includes maps illustrating all segments of the North Fork John Day recommended as eligible as well as identifies the location of outstandingly remarkable values. Those values identified as outstandingly remarkable for the North Fork John Day River are discussed in greater detail below. Attachment B, Table B1, is a narrative table that provides details for each segment of the 19 waterways reviewed and shows the tentative classification (either scenic or recreational) suggested for each of the North Fork John Day segments that meet the eligibility criteria.

Outstandingly Remarkable Values along the North Fork John Day River:

Sixteen segments of the North Fork John Day River that flow through public lands were reviewed, totaling 25.55 miles. The shortest segment is 0.13 mile and the longest segment is 7.79 miles. All 16 segments are located within a section of the river that is 36.24 miles long, beginning along County Road 31 (Wall Creek Road, roughly 3 miles northeast from Monument) in Section 23, T. 7 S., R. 28 E., in Grant County, and ending in Section 26, T. 6 S., R. 31 E., in Umatilla County. The 16 review segments through public lands make up 70.5 percent of this section of river. All 16 segments possess outstandingly remarkable scenic, recreation, fish, and wildlife values.

Scenic values: The review segment North Fork John Day River "flows through some of the finest scenery in Oregon" (BLM 2000, p. 110), which involves a river valley bordered by steep, rugged hillsides with rock outcroppings and a variety of vegetarian types, including strands of ponderosa pines and Douglas fir, grassy meadows, and lush riparian vegetation. Views of adjacent mountain peaks are offered along some sections of the river. This mix of landform, vegetation, water, and color add to the visual values along the river. While such features are not unique among rivers in the Blue Mountains ecoregion of northeastern Oregon, they are notable and of a quality to attract visitors from outside the area. The scenic values were also considered important enough to protect that the entire river section, including all 16 segments through public lands, were included into the State Scenic Waterway System under the Oregon Scenic Waterways Act (ORS 390.826). Only 18 other waterways and 1 lake in Oregon are afforded such protective status.

A well-maintained gravel road runs adjacent to the river from Hwy 395 to Potamus Creek, which occasionally can intrude on the scenic nature of the river, while, at the same time, provides easy access for visitors to view the scenery. The river corridor in this section is narrow and the hills rise over 2,000 feet, with dense strands of ponderosa pines on north-facing slopes. A few houses and ranches are located along this section of the river.

A primitive road (with no public easement through private sections) located from Potamus Creek downstream to the confluence with Wall Creek, is less conspicuous and the scenery more primitive. Only a few human-made structures and 4x4 roads are seen along this segment of the river, leaving much of the area in a more natural state. Here, the river flows through a wide valley with adjacent mountain peaks rising less than 2,000 feet. The area is mostly rangeland, with steep hillsides dotted with strands of ponderosa pine.

Recreation Values: The North Fork John Day offers numerous recreational opportunities, including boating, hunting, fishing, camping, hiking, sightseeing, watchable wildlife, recreational gold panning, nature study, and photography. The boating opportunities are particularly rare or unique in northeastern Oregon as visitors are offered opportunities for solitude and a natural environment without extremely challenging white water (only Class I & II rapids) or access issues that could otherwise make the trip too difficult or dangerous for less experienced river runners. It also provides opportunities for various trip lengths, from day trips to trips lasting a few days. While the mainstem John Day, from Service Creek to Clarno, offers similar river rafting experiences (e.g., Class I & II rapids and numerous access points) the North Fork (from Dale to Monument, which encompasses the study section) is considered by some as having better scenery and whitewater (Cassady et al. 1994).

Boater registration (albeit incomplete) collected between 1998 and 2005 documented that nearly one third of trip leaders traveled from outside of Oregon to float the river, while the majority those coming from Oregon (all except one) traveled over 100 miles. This data suggest that visitors are willing to travel long distances to use the river resources for recreational purposes.

Fish Values: All steelhead trout in the John Day River Basin are genetically grouped into the Middle Columbia Evolutionarily Significant Unit (ESU). Steelhead in this ESU were listed as threatened under the Endangered Species Act (ESA) on March 25, 1999 ([64 FR 14517], effective May 24, 1999, with threatened status reaffirmed on January 5, 2006). The John Day basin is included in the ESU. The North Fork subbasin supports the largest and most important run of anadromous fish within the basin (ODFW 2005a), producing approximately 43 percent of the total summer steelhead population in the basin (BLM 2000). This estimate may have increased in recent years as trend estimates for the lower segment of the North Fork John Day, including the study section, showed an 11 percent increase in population abundance between 1997 and 2001 (Cooney 2005). During this same period, the mainstem John Day River and South and Middle Forks have experienced downward trends. Consequently, the North Fork John Day is an important contributor to the total population of Middle Columbia summer steelhead trout in the Middle Columbia ESU. The 25.55 miles of river that flow through BLM land serve an important role in this contribution.

In addition, the North Fork John Day population of the Middle Columbia Summer Steelhead Species Management Unit meets all six criteria used to determine near-term sustainability (e.g., existing populations, distribution, abundance, productivity, reproductive independence, and hybridization; ODFW 2005). This includes the study segment as well as approximately 54 miles upstream from the study segment through US Forest Service lands that are currently part of the national WSR system. This designation is partially due to possessing outstandingly remarkable fisheries values, including steelhead trout. The protection afforded by the upstream WSR designation adds to the integrity of the fisheries in the review segments and helps ensure that the biological needs (i.e., migration corridor) of the species are met.

STEP III: MANAGEMENT OF RIVERS RECOMMENDED ELIGIBLE

Waterways determined eligible and given a tentative classification as wild, scenic, and/or recreational require protective measures necessary to preserve their free-flowing nature, protect their identified outstandingly remarkable values, and maintain their tentative classification. Specific management prescriptions for eligible river segments provide protection in the following ways (BLM 1993):

a **Free-Flowing Values**: The free-flowing characteristics of eligible river segments cannot be modified to allow stream impoundments, diversions, channelization, and/or rip-rapping to the extent the BLM is authorized under law.

b **River-Related Values**. Each segment shall be managed to protect identified outstandingly remarkable values (subject to valid existing rights) and, to the extent practicable, such values shall be enhanced.

c **Classification Impact**. Management and development of the eligible river and its corridor cannot be modified, subject to valid existing rights, to the degree that its eligibility or tentative classification would be affected (i.e., its tentative river area classification cannot be changed from wild to scenic, or from scenic to recreational). Should a nonsuitable determination be made in the RMP process, then the river shall be managed in accordance with management objectives as outlined in the plan document.

Although this report only recommends the North Fork John Day River as eligible, it includes interim protection measures for each of the outstandingly remarkable values identified. These recommendations are presented in Attachment C (Interim Protection Measures for Outstandingly Remarkable Values identified along the North Fork John Day River). Comprehensive protective management as identified in BLM Manual 8351 would be applied to the North Fork John Day River if it were determined eligible and include management objectives, management actions, and appropriate allocations of land and resource uses that would maintain or enhance the outstandingly remarkable values and tentative WSR classification identified on the public lands involved. Such protective measures would be subject to valid existing rights and would remain in effect until eligibility determinations are superseded.

ATTACHMENT A

OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE

June 11, 2006

ATTACHMENT A: OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE

OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE
01 Potamus Creek
Scenic: The scenery along the creek is common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area. **Fisheries:** While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the species, and the habitat is not exceptional in terms of quality due to grazing and past logging. **Recreation** While a number of recreational opportunities are provided (hunting, hiking, backpacking, horseback riding), these are not unique enough to attract visitors from outside the region. **Wildlife**. In general, wildlife diversity along the creek is relatively high due to riparian vegetation and a perennial source of water. However, this characteristic is not unique to Potamus Creek as it is common along tributaries of the North Fork John Day. The creek corridor supports a number of wildlife species, including bighorn sheep that were reintroduced to the area in 2002. The sheep, however, have a wide range and are not confined to the creek corridor. **Historical**: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. **Cultural**: Little is know about the specific cultural resources along Potamus Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work. **Similar Values**: Potamus Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
02 North Fork John Day
Scenic: River flows through extremely step hillsides with rock outcroppings and a variety of vegetation types, including stands of ponderosa pine, grassy meadows, and lush riparian vegetation. In portions of the study area, the river flows through a wide valley with adjacent mountain peaks in clear view. This mix of landform, vegetation, water, and color results in notable or exemplary visual features and/or attractions within the geographic region. A well-maintained gravel road runs adjacent to the river from Hwy 395 to Potamus Creek, which occasionally can intrude on the scenic nature of the River, while, at the same time, providing easy access for visitors to view the scenery. A primitive road (with no public easement through private sections) located from Potamus Creek downstream to the confluence with Wall Creek, is less conspicuous and the scenery more primitive. The entire segment is designated a State Scenic Waterway. **Fisheries:** All steelhead trout in the John Day River Basin are genetically grouped into the Middle Columbia Evolutionarily Significant Unit (ESU). Steelhead in this ESU were listed as threatened under the Endangered Species Act (ESA) on March 25, 1999. According to the Oregon Native Fish Status Report (ODFW

2005), the North Fork John Day population of the Mid Columbia Summer Steelhead Species Management Unit meets all six criteria used to determine near-term sustainability (e.g., existing populations, distribution, abundance, productivity, reproductive independence, and hybridization). This makes the North Fork important in terms of contributing to the overall populations of resident and/or indigenous fish species. Approximately 54 miles of the North Fork upstream from the currently reviewed sections through US Forest Service lands are part of the National WSR System, partially due to the possession of outstandingly remarkable fisheries values, including steelhead trout. This upstream protection adds to the integrity of the fisheries in the review segments. Due to the existing population of threatened steelhead trout, its viability, and connectivity to upstream populations currently provided protection under the National WSR system, the North Fork John Day contain outstandingly remarkable fishery values.

Recreation: Recreation opportunities along the North Fork from Hwy 395 to Potamus Creek include fishing, boating, dispersed camping, picnicking, and driving for pleasure. Access to various points along the river is easy due to a well-maintained gravel road with public access. Boating use includes one to three day trips from various locations, primarily occurring in May and June. Recreation opportunities exist downstream from Potamus Creek to Wall Creek, but are more limited due to the lack of public access. Boating occurs without risk of trespass (if recreationists do not land or camp on private property) as there are downstream locations on public lands or in the developed Monument River Access Park to serve as take-out locations. While there are a number of boating opportunities within the region (northeastern Oregon), what is offered on the N. Fork is unique as it offers semi-primitive boating opportunities on a relatively peaceful river, perfect for the novice boater and those desiring a family oriented trip. These recreation opportunities, specifically those related to boating and fishing, can be considered outstandingly remarkable.

Wildlife. In general, wildlife diversity along the river is relatively high due to the riparian vegetation, grasslands, perennial source of water, and availability of prey. The study section contains several documented wintering nocturnal roost sites used by Bald Eagles, a threatened species. The river also has a large population of Lewis' woodpeckers, which is listed on the Oregon Sensitive Species List as critical. However, these populations are not large enough to be considered at a regional or national level and thus cannot be considered outstandingly remarkable.

Historical: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. A number of historic (i.e., 50 years older or older) structures occur within the ½-mile boundary of the river on BLM lands; however, these are not known to be unique or to have any significance.

Geologic: No rare, unusual, or unique geologic features, processes, or phenomena are located along the river.

Cultural: Little is know about the specific cultural resources along the North Fork John Day River as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work. Consequently, cultural and historic resources are not considered outstandingly remarkable.

Similar Values: North Fork John Day River contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.

03 Indian Creek

Scenic: The scenic values within the creek corridor are not notable or exemplary, but are common to other waterways in the geographic region.

Fisheries: While Indian Creek has adequate habitat for westslope cutthroat trout, a state special status species listed as vulnerable, such habitat is not

OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE
exceptionally high and the abundance of adult fish (50 – 500 as per the 2005 Oregon Native Fish Status Report) does not make it a major contributor for the species. **Recreational**: Recreational opportunities are limited (hunting, hiking, nature viewing) and not unique enough to attract visitors from outside the region. **Wildlife**: While wildlife are present (deer, elk, etc.) along the creek corridor and habitat is in fair condition (with the exception of heavily grazed areas), the public lands do not contribute as one of the top producers of resident or indigenous wildlife species important to the area, and habitat quality is not exceptionally high. **Historical**: The public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. **Cultural**: No archaeological sites are known to occur within the creek corridor and none have been observed during field work. While no formal cultural inventories have been conducted within the creek corridor, it is unlikely that any significant or unusual sites would be identified. **Similar Values**: Indian Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
04 Little Pine Creek
(Below only applies to the upstream segments of Little Pine Creek as the Downstream segment is not free flowing) **Scenic**: The scenic values within the creek corridor are not notable or exemplary, but are common to other waterways in the geographic region. **Fisheries**: While the upstream segments of Little Pine Creek (between USFS and private lands) do contain adequate habitat for westslope cutthroat trout, a state special status species listed as vulnerable, such habitat is not exceptionally high and the abundance of adult fish (less than 50 as per the 2005 Oregon Native Fish Status Report) does not make it a major contributor for the species. **Recreational**: While numerous recreational opportunities are afforded (hunting, hiking, nature viewing, OHV use, horseback riding) these are common throughout the area and not unique enough to attract visitors from outside the region. **Wildlife**: The creek corridor offers good habitat for a number of species (deer, elk, turkeys, etc.), the public lands do not contribute as one of the top producers of resident or indigenous wildlife species important to the area, and habitat quality is not exceptionally high. **Historical**: The public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located within a ½-mile corridor along the creek.

OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE
Cultural: No archaeological sites are known to occur within the creek corridor and none have been observed during field work. While no formal cultural inventories have been conducted within the creek corridor, it is highly unlikely that any significant or unusual sites would be identified. **Similar Values**: Little Pine Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
05 Bridge Creek
Scenic: The scenery along the creek is common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area. **Fisheries:** Spawning and rearing of Mid Columbia steelhead trout occurs at a high rate in Bridge Creek. The creek provides important spawning and rearing habitat for steelhead in a section of the mainstem of the John Day (the lower John Day River) relatively devoid of other tributaries. Bridge Creek also acts as a corridor to a number of other spawning tributaries in the region, further adding to the population in the Lower John Day River. However, an increasing proportion of hatchery fish entering the lower John Day River from the Columbian River (53% in 2004 compared to 8% in 2001) has reduced the reproductive independence of the lower John Day River population. It is believed that some of these fish hatchery fish may enter Bridge Creek, which would reduce the uniqueness of the fish produced in the stream as well as the importance of population contributions to the John Day River. **Recreation** While a number of recreational opportunities are provided (driving for pleasure, hunting, hiking, backpacking, horseback riding, camping), these are not unique enough to attract visitors from outside the region. **Wildlife**. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Bridge Creek as it is common along tributaries of the John Day River. **Historical**: The Bridge Creek corridor was very active during the pioneer days and includes sites from a number of early homesteads and ranches of historical note. Stephen Carroll settled with his family on Bridge Creek near the Painted Hills in 1868. While the locations of most of the old homesteads are on NPS lands, the Carroll cemetery is located on public lands (Crook County Historical Society 1998). The Connolly Ranch was one of the biggest operations in the area that was started in 1902. Portions of the ranch are on public lands. Other historic figures of particular note that settled the Bridge Creek area (although no known structures associated with these individuals are on public lands) include A. Sutton, who was one of the first settlers who operated the Bridge Creek Post Office from 1868 to 1882. While the location of the post office occurred on private lands, the activity associated with it spread onto BLM lands. Christian A. Meyers and "Alkali" Frank Hewott were also among the first settlers in the area. They established the Bridge Creek stage station in 1863, which was the first white settlement of any kind in Wheeler County (Fussner 1975). Although these events are important from an historical standpoint, no structures of any of the sites occur on public lands. Some structures that did occur on public lands (e.g., Connolly sheep shearing barn) have completely collapsed. It would thus be nearly impossible to have any of the historical sites along Bridge Creek on public lands listed on the National Register of Historic Places, making it difficult to consider historical elements of Bridge Creek as outstandingly remarkable. Part of the Dalles Military Road (established February 25, 1867) runs through much of the study section of Bridge Creek. Some segments still exist, with much of Burnt Ranch Road having been built on top of the old route. The route followed the Dalles-Canyon City Wagon Road, which was an important travel corridor and motivation for building homesteads, ranches, and businesses along the route. The Dalles Military Road was part of a fraudulent government land trade (see Beckham and Lentz 2000). Early paleontologists, including Thomas Condon, William de Gracey, and John C. Merriam, also relied heavily on the route during their initial

OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE
exploration, beginning the late 1800s. While some segments of the original route in its historic state can be found along Bridge Creek, the longest being in Segment 5.06, longer as well as more interesting segments in terms of engineering can be found outside the Bridge Creek corridor. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek that is dependent upon the creek (or restricted to ¼ mile on either side of the creek). While the potential for fossils is abundant, such occurrences are not unique compared to what can be found in the region, including the Painted Hills unit of John Day Fossil Beds National Monument. **Cultural**: Little is know about the specific cultural resources along Bridge Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during fieldwork. Consequently, cultural and historic resources are not considered outstandingly remarkable. **Similar Values**: Bridge Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
06 Girds Creek
Scenic: The waterway corridor does have scenic values. Ephemeral waterfalls attract visitors. While they are in the river corridor, the scenic values are dependent upon the flows of side streams flowing over the cliffs. Such flows are not river-related and are not regular or predictable. **Fisheries**: Creek does not contain suitable habitat or sufficient flows to support important fisheries. **Recreational**: Recreational opportunities are limited (driving for pleasure, nature viewing, hiking) and not unique enough to attract visitors from outside the region. **Wildlife**: Wildlife populations are limited due to major road though the creek bottom. Habitat is not high quality due to the presence of the road. **Historical**: The public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. **Cultural**: No archaeological sites are known to occur within the creek corridor and none have been observed during field work. While no formal cultural inventories have been conducted within the creek corridor, it is unlikely that any significant or unusual sites would be identified. **Similar Values**: Girds Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
07 Bear Creek
Scenic: The scenery along the creek is common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area. **Fisheries:** While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the

species and the habitat is not exceptionally high due to past grazing activities and a recent flash flood that removed much of the riparian vegetation (although the habitat is recovering).

Recreation While a number of recreational opportunities are provided (hunting, hiking, backpacking, horseback riding, camping), these are not unique enough to attract visitors from outside the region.

Wildlife. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Bear Creek as it is common along tributaries of the John Day River.

Historical: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. A shearing cabin is located on public lands in the review section; however, this structure does not pose any significant historic value.

Geologic: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek.

Cultural: Little is know about the specific cultural resources along Bear Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work. Consequently, cultural and historic resources are not considered outstandingly remarkable.

Similar Values: Bear Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.

08 Stony Creek

Scenic: The scenery along the lower portion of the creek can be considered common that found along other creeks in the geographic region. The upper portion of the creek does provide greater scenic contrasts due to its steep canyons, sheer cliffs, waterfalls, and views; however, such scenic values are not unique enough in the region to warrant being considered outstandingly remarkable. The narrow portion of the canyon with the sheer cliffs is relatively short (less than one mile) and is comparable to that found along Jericho Creek, although more pristine. The canyons through which the mainstem and North Fork John Day rivers flow are more spectacular from a scenic perspective.

Fisheries: While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the species and the habitat is not exceptional in terms of quality due to past logging and grazing.

Recreation While a number of recreational opportunities are provided (hunting, hiking, backpacking, horseback riding), these are not unique enough to attract visitors from outside the region.

Wildlife. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Stony Creek as it is common along tributaries of the North Fork of the John Day. Wildlife is thus not considered an outstandingly remarkable value.

Historical: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a

OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE
significant event, important person, or cultural activity of the past that was rare or unusual in the area. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. **Cultural**: Little is know about the specific cultural resources along Stony Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work. Consequently, cultural and historic resources are not considered outstandingly remarkable. **Similar Values**: Stony Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
09 Jericho Creek
Scenic: The scenery along the creek seems common to that found along other creeks in the geographic region and not of a quality that would attract visitors from outside the area. **Fisheries:** Habitat is marginal for steelhead trout as portions of the creek are dry during some parts of the year (with water going underground) and the creek is partly modified by the road running along and over it. While spawning does occur, it is limited. **Recreation** While a number of recreational opportunities are provided (OHV and 4x4 use, hunting, hiking, backpacking, horseback riding), these are not unique enough to attract visitors from outside the region. **Wildlife**. In general, wildlife diversity and habitat are below normal due to the level of disturbance caused by the existing road, making it poorer compared to that found along other tributaries of the North Fork of the John Day. **Historical**: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. **Cultural**: Little is know about the specific cultural resources along Jerricho Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work. **Similar Values**: Jericho Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
10 Big Wall Creek
Scenic: The scenery along the creek is common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area. **Fisheries:** While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the

species and the habitat is not exceptional due to past grazing and logging activities. In addition, much of the channel is bedrock controlled, which reduces available spawning habitat.

Recreation While a number of recreational opportunities are provided (driving for pleasure, OHV and 4x4 use, hunting, hiking, backpacking, horseback riding, camping), these are not unique enough to attract visitors from outside the region.

Wildlife. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Big Wall Creek as it is common along tributaries of the North Fork of the John Day.

Historical: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area.

Geologic: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek.

Cultural: Little is know about the specific cultural resources along Big Wall Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work.

Similar Values: Big Wall Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.

11 Little Wall Creek

Scenic: The scenery along the creek is common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area.

Fisheries: While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the species and the habitat is not exceptional in terms of quality due to past grazing and logging activities.

Recreation: Recreation opportunities are currently limited due to private land at the mouth of Little Wall Creek that prevents access; however, there is the potential for such opportunities as hiking, nature viewing, hunting, , backpacking, and horseback riding. Even if a public easement was acquired, the recreation opportunities are not unique enough to attract visitors from outside the region.

Wildlife. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Little Wall Creek as it is common along tributaries of the North Fork of the John Day.

Historical: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area.

Geologic: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek.

OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE
Cultural: Little is know about the specific cultural resources along Little Wall Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work. Consequently, cultural and historic resources are not considered outstandingly remarkable. **Similar Values**: Little Wall Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
12 Ditch Creek
Scenic: The scenery along the creek is common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area. **Fisheries:** While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the species and the habitat is not exceptionally high due to past logging and grazing activities. **Recreation** While a number of recreational opportunities are provided (hunting, hiking, backpacking, horseback riding), these are not unique enough to attract visitors from outside the region. **Wildlife**. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Ditch Creek as it is common along tributaries of the North Fork of the John Day. **Historical**: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. **Cultural**: Little is know about the specific cultural resources along Ditch Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work. Consequently, cultural and historic resources are not considered outstandingly remarkable. **Similar Values**: Ditch Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
13 Cottonwood Creek
Scenic: The scenic values within the creek corridor are not notable or exemplary, but are common to other waterways in the geographic region. **Fisheries**: While steelhead spawning occurs in Cottonwood Creek, there is a considerable amount of streambed modification and the habitat is not sufficient to support the numbers of fry produced. **Recreational**: While numerous recreational opportunities could be provided (hunting, hiking, nature viewing, OHV use, horseback riding), these are common throughout the area and not unique enough to attract visitors from outside the region. The lack of a public easement through private land along the creek

currently prevents most use.

Wildlife: While the creek corridor offers good habitat for a number of species (deer, elk, turkeys, etc.), the public lands do not contribute as one of the top producers of resident or indigenous wildlife species important to the area, and habitat quality is not exceptionally high.

Historical: The public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area.

Geologic: No rare, unusual, or unique geologic features, processes, or phenomena are located within a ½-mile corridor along the creek.

Cultural: No archaeological sites are known to occur within the creek corridor and none have been observed during field work. While no formal cultural inventories have been conducted within the creek corridor, it is highly unlikely that any significant or unusual sites would be identified.

Similar Values: Cottonwood contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.

14 Wall Creek

Scenic: The scenery along the creek is common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area.

Fisheries: While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the species and the habitat is not exceptionally high due to past logging and grazing activities. In addition, much of the channel is bedrock controlled, which reduces available spawning habitat.

Recreation: Recreational opportunities are generally limited to driving for pleasure, nature watching, picnicking, and possibly fishing. These are not unique enough to attract visitors from outside the region.

Wildlife: In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Wall Creek as it is common along tributaries of the North Fork of the John Day.

Historical: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area.

Geologic: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek.

Cultural: Little is know about the specific cultural resources along Wall Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work.

Similar Values: Wall Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.

OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE
15 Mallory Creek
Scenic: The scenery along the creek seems common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area. **Fisheries:** While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the species and the habitat is not exceptionally high due to past logging and grazing activities. **Recreation** While a number of recreational opportunities are provided (OHV and 4x4 use, hunting, hiking, backpacking, horseback riding), these are not unique enough to attract visitors from outside the region. **Wildlife**. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Mallory Creek as it is common along tributaries of the North Fork of the John Day. **Historical**: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. **Cultural**: Little is know about the specific cultural resources along Mallory Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work. Consequently, cultural and historic resources are not considered outstandingly remarkable. **Similar Values**: Mallory Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
16 Graves Creek
Scenic: The scenery along the creek is common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area. **Fisheries:** While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the species and the habitat is not exceptional in terms of quality due to past logging and grazing. **Recreation** While a number of recreational opportunities are provided (hunting, hiking, backpacking, horseback riding), these are not unique enough to attract visitors from outside the region. **Wildlife**. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Graves Creek as it is common along tributaries of the North Fork John Day. **Historical**: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a

significant event, important person, or cultural activity of the past that was rare or unusual in the area.

Geologic: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek.

Cultural: Little is know about the specific cultural resources along Graves Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and none have been observed during field work.

Similar Values: Graves Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.

17 Rudio Creek

Scenic: While the scenery along the creek differs from that found along most other creeks in the geographic region, it does not appear of a quality that would attract visitors from outside the area.

Fisheries: While the creek has suitable habitat for Mid Columbia steelhead trout, and the species is known to spawn in the creek, it is not a top producer for the species and the habitat is not exceptional in terms of quality due to grazing and past logging.

Recreation: Public access through private land is currently allowed along Rudio Creek, which offers opportunities for hiking, backpacking, horseback riding, and hunting, with trophy elk hunting a major draw to the area. However, the hunting is not restricted to the creek corridor, and hunting also occurs on private land where hunters pay for guided hunting services.

Wildlife. In general, wildlife diversity along the creek is relatively high due to the thick cover, perennial source of water, and travel corridor. Elk are especially prevalent, as are mountain lions, deer, and bear.

Historical: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area.

Geologic: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. An interpretive site is being considered along the creek as it is one of the few places to view dikes crated during lava flows along the hillside (lava infill); however, this geological phenomena is outside the ½-mile corridor and not creek related.

Cultural: No archaeological sites are known to occur within the creek corridor and none have been observed during field work. While no formal cultural inventories have been conducted within the creek corridor, it is highly unlikely that any significant or unusual sites would be identified.

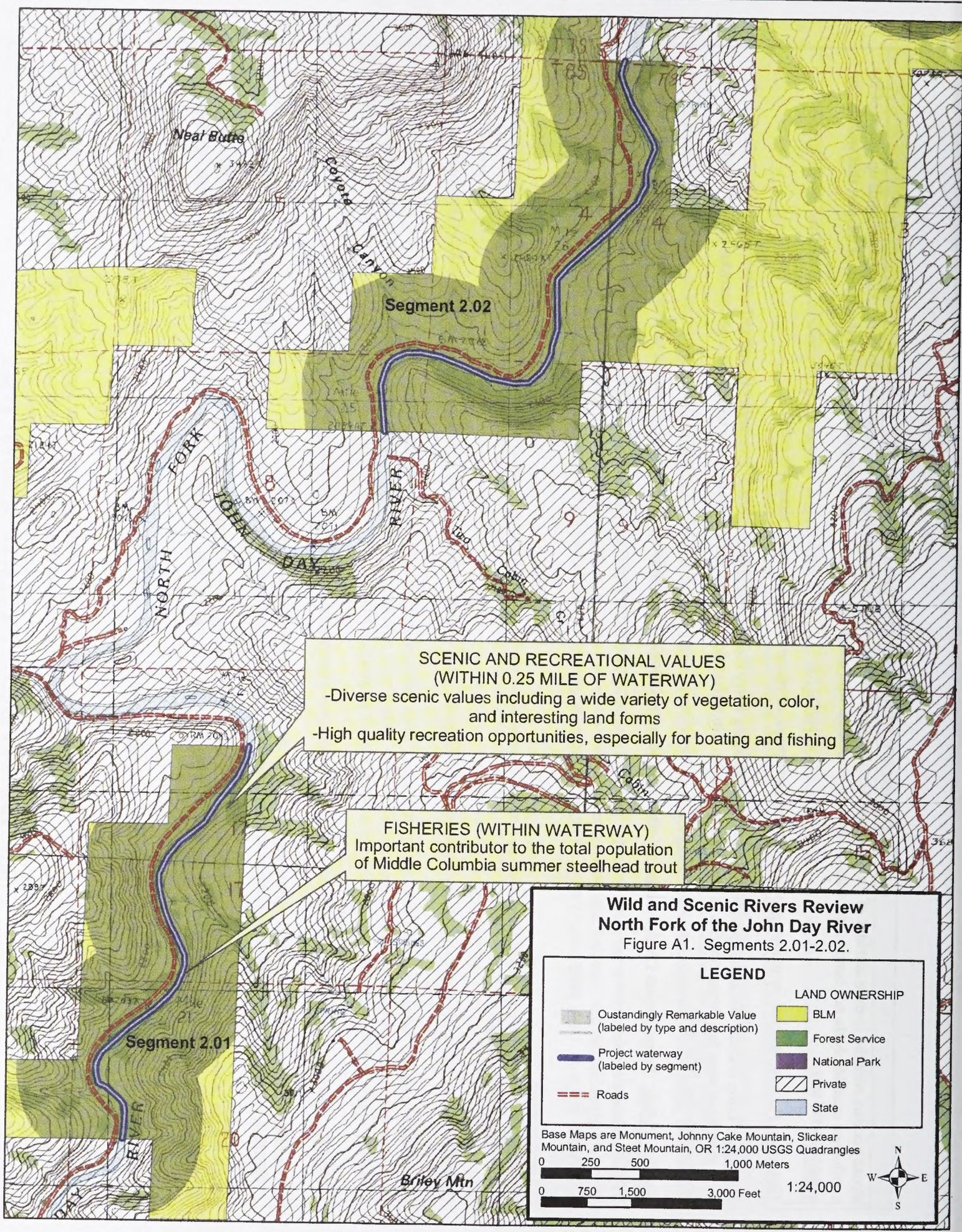
Similar Values: Rudio Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.

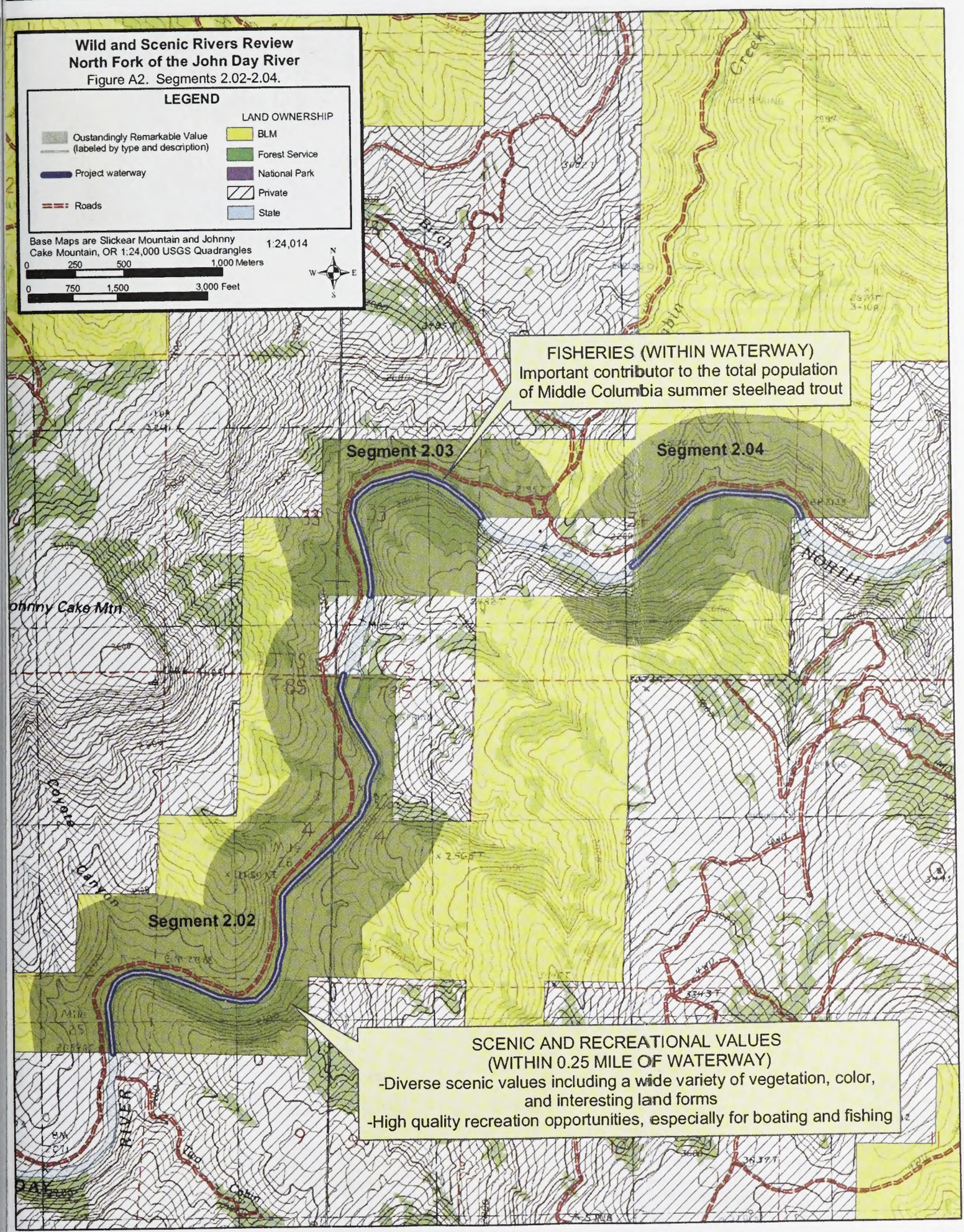
18 Jackknife Canyon Creek

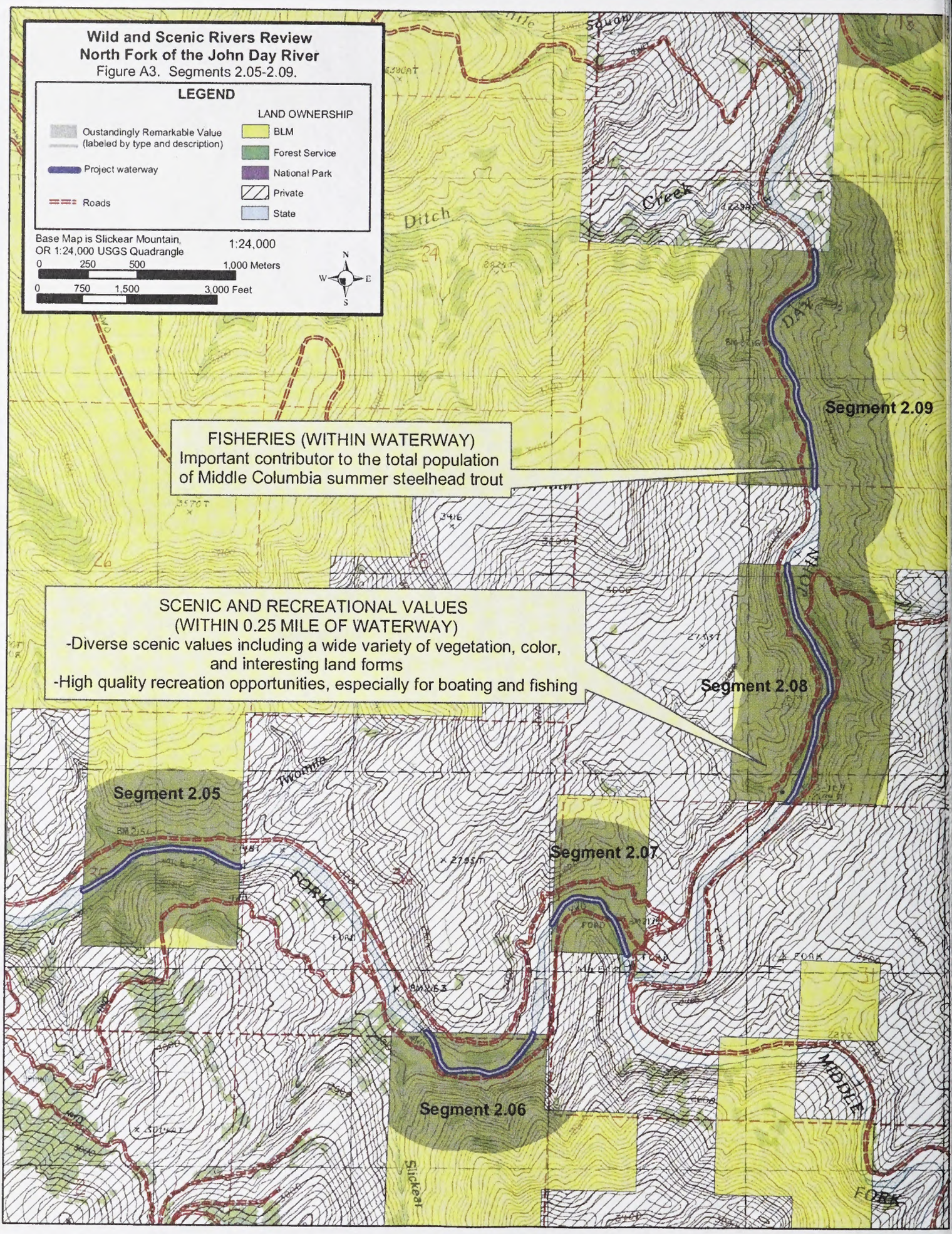
Scenic: The scenery along the creek is common to that found along other creeks in the geographic region, and it does not appear to be of a quality that would attract visitors from outside the area.

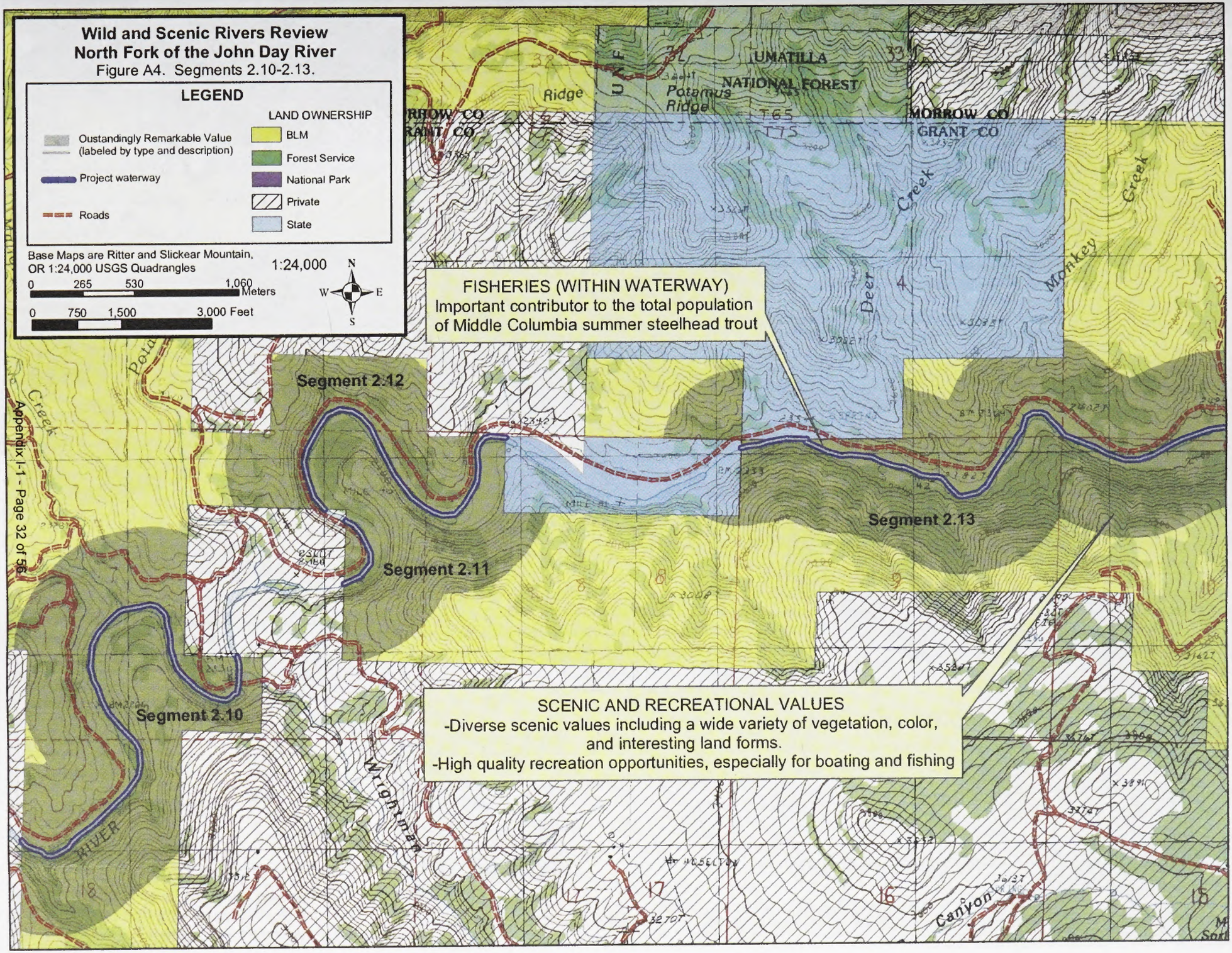
OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE
Fisheries: While the creek has suitable habitat for Mid Columbia steelhead trout, the species is known to spawn in the creek, and it is in an area of the lower John Day River that has few spawning tributaries, it is not a top producer for the species and the habitat is not exceptionally high quality. In addition, roughly half of the steelhead spawning in the lower John Day River are hatchery fish coming from the Columbia River, which reduces reproductive independence of that population. **Recreation** While a number of recreational opportunities are provided (hunting, hiking, backpacking, horseback riding, camping), these are not unique enough to attract visitors from outside the region. **Wildlife**. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. A number of bighorn sheep use the canyon. However, these characteristics are not unique to Jackknife Canyon Creek as it is common along tributaries of the John Day River. **Historical**: While no formal historic surveys have been conducted, it is most likely that the public lands do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. **Cultural**: Little is know about the specific cultural resources along Jackknife Canyon Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. While signs of prehistoric use have been observed during fieldwork, including some stone tool flakes and a cave that appeared to have been sifted for artifacts, such sites could not be considered rear or unusual. **Similar Values**: Jackknife Canyon Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
19 Ferry Canyon Creek
Scenic: The scenery along the creek is common to that found along other creeks in the geographic region and not of a quality that would attract visitors from outside the area. **Fisheries:** While the creek has suitable habitat for Mid Columbia steelhead trout, the species is known to spawn in the creek, and it is in an area of the lower John Day River that has few spawning tributaries, it is not a top producer for the species and the habitat is not exceptionally high quality. In addition, roughly half of the steelhead spawning in the lower John Day River are hatchery fish coming from the Columbia River, which reduces reproductive independence of that population. **Recreation** While a number of recreational opportunities are provided (hunting, hiking, backpacking, horseback riding, camping), these are not unique enough to attract visitors from outside the region. **Wildlife**. In general, wildlife diversity along the creek is relatively high due to the riparian vegetation and perennial source of water. However, this characteristic is not unique to Ferry Canyon Creek as it is common along tributaries of the John Day River. **Historical**: The confluence of Ferry Canyon Creek and the John Day River contains a historic river crossing (ferry); however, the location of this crossing

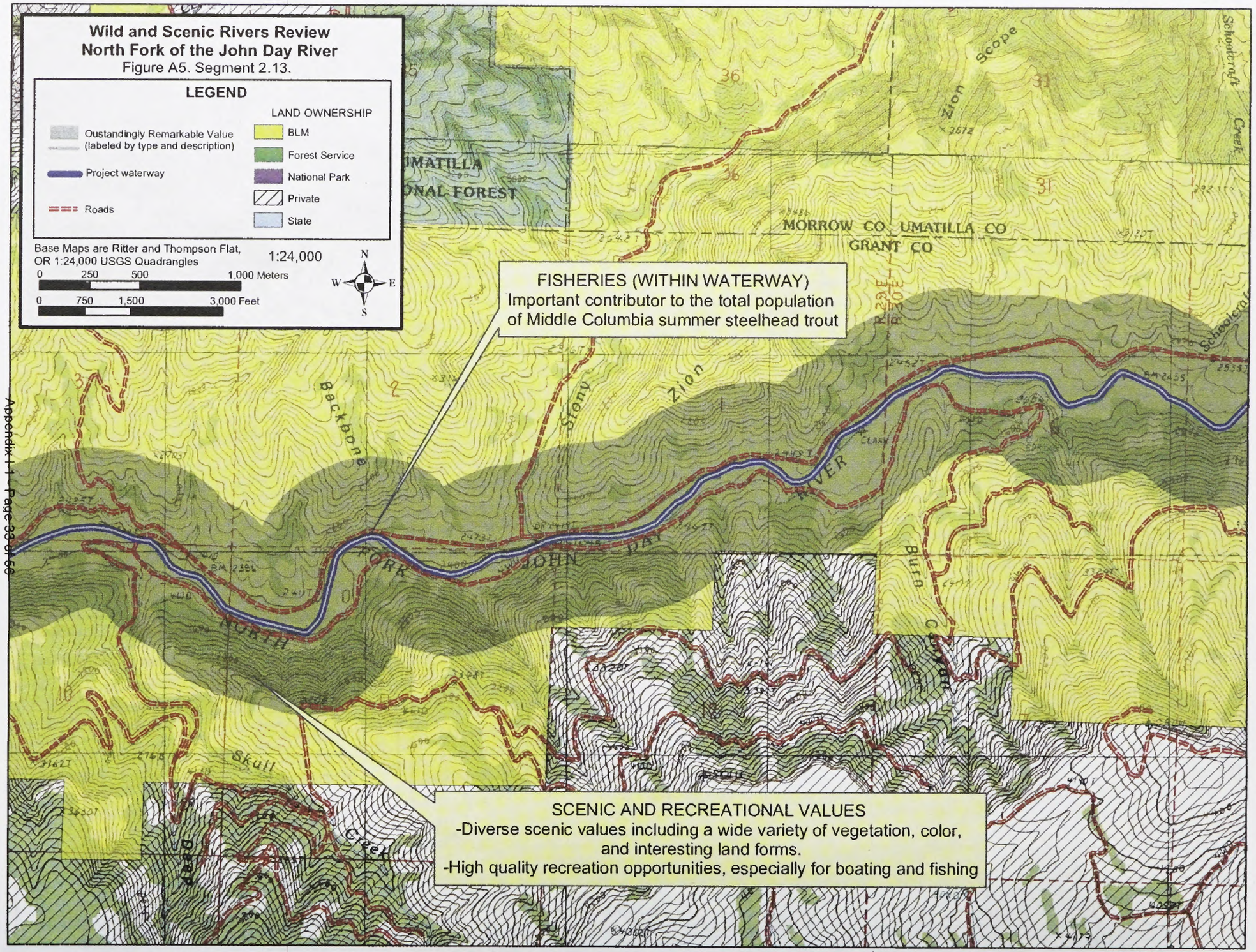
OUTSTANDINGLY REMARKABLE VALUES SUMMARY TABLE
already occurs with the ¼-mile corridor of the Wild and Scenic John Day River and is thus within the national WSR System. The public lands upstream of the confluence most likely do not contain any sites or features associated with a significant event, important person, or cultural activity of the past that was rare or unusual in the area. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena are located along the creek. **Cultural**: Little is know about the specific cultural resources along Ferry Canyon Creek as no formal inventories of cultural values have been conducted. In fact, there have been few formal studies in the geographic area. No archaeological sites are known to occur within the creek corridor and no sites have been observed during field work. **Similar Values**: Ferry Canyon Creek contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.

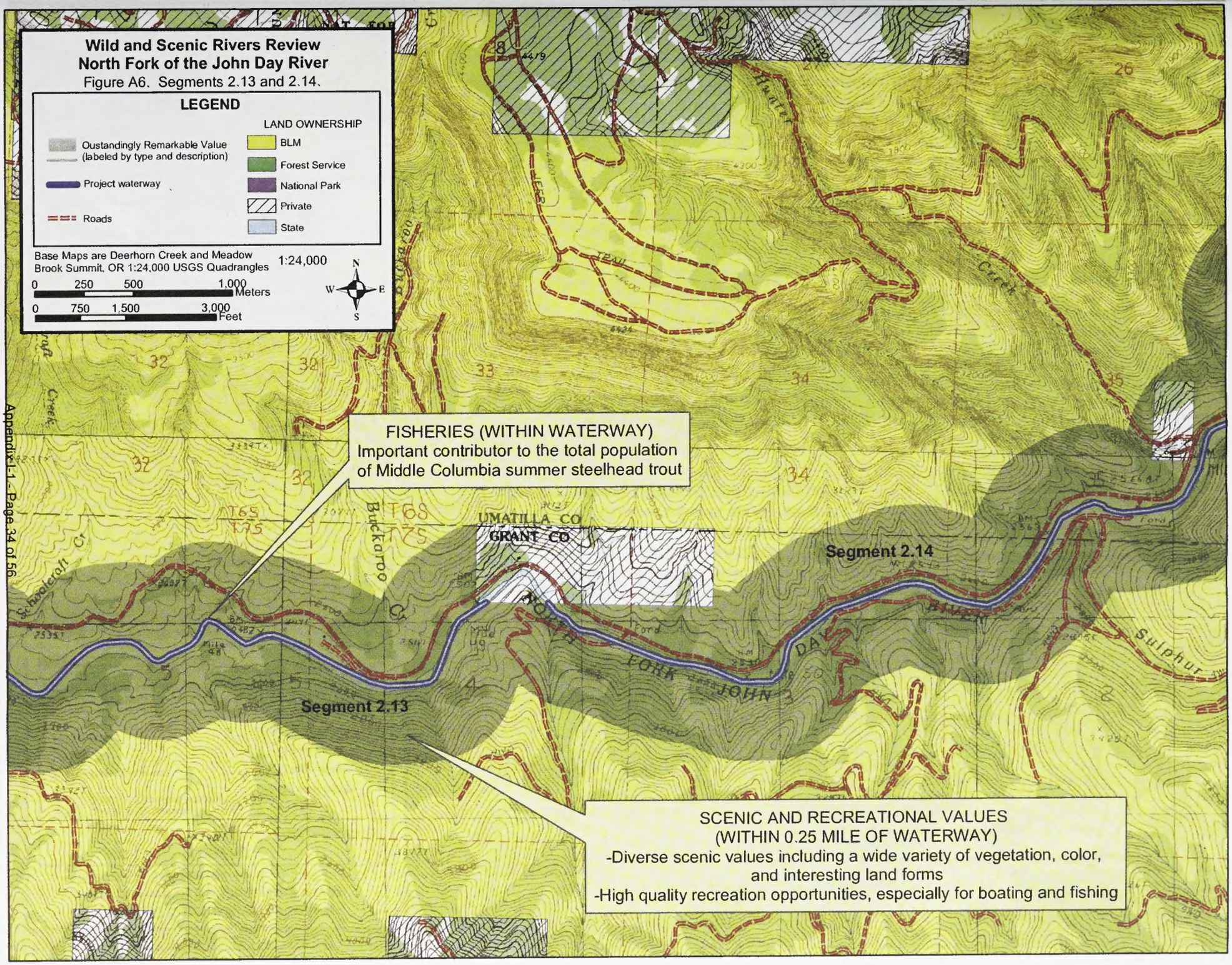

Neal Butte
Coyote Canyon
Segment 2.02
NORTH FORK JOHN DAY RIVER
Two Cabin
SCENIC AND RECREATIONAL VALUES
(WITHIN 0.25 MILE OF WATERWAY)
-Diverse scenic values including a wide variety of vegetation, color, and interesting land forms
-High quality recreation opportunities, especially for boating and fishing
FISHERIES (WITHIN WATERWAY)
Important contributor to the total population of Middle Columbia summer steelhead trout
Segment 2.01
JOHN DAY RIVER
Briley Mtn
Wild and Scenic Rivers Review
North Fork of the John Day River
Figure A1. Segments 2.01-2.02.
LEGEND
Oustandingly Remarkable Value (labeled by type and description)
Project waterway (labeled by segment)
Roads
LAND OWNERSHIP
BLM
Forest Service
National Park
Private
State
Base Maps are Monument, Johnny Cake Mountain, Slickear Mountain, and Steet Mountain, OR 1:24,000 USGS Quadrangles
0 250 500 1,000 Meters
0 750 1,500 3,000 Feet
1:24,000
N
W
E
S

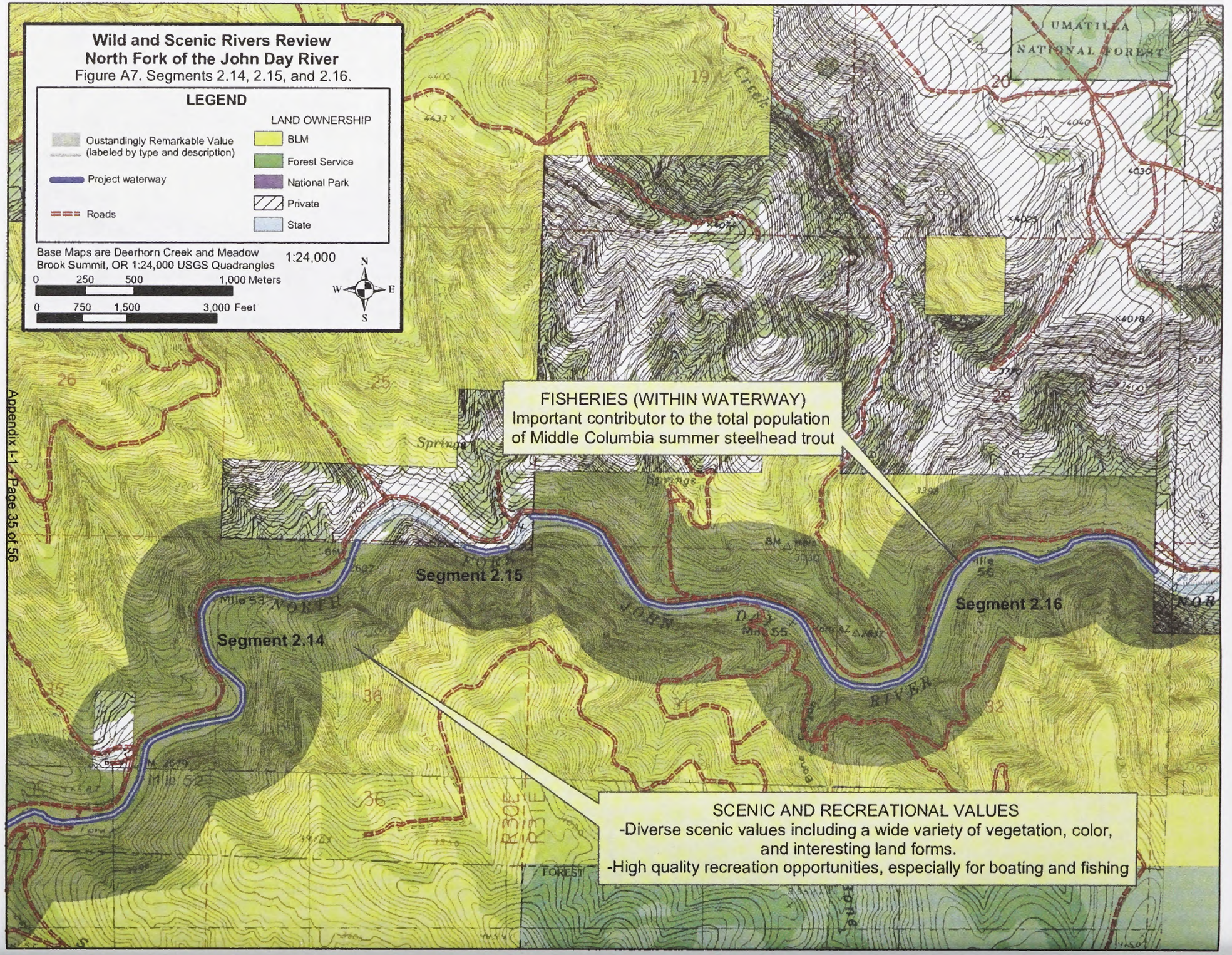

Wild and Scenic Rivers Review
North Fork of the John Day River
Figure A2. Segments 2.02-2.04.
LEGEND
Outstandingly Remarkable Value (labeled by type and description)
Project waterway
Roads
LAND OWNERSHIP
BLM
Forest Service
National Park
Private
State
Base Maps are Slickear Mountain and Johnny Cake Mountain, OR 1:24,000 USGS Quadrangles
1:24,014
0 250 500 1,000 Meters
0 750 1,500 3,000 Feet
N
W
E
S
FISHERIES (WITHIN WATERWAY)
Important contributor to the total population of Middle Columbia summer steelhead trout
Segment 2.03
Segment 2.04
Segment 2.02
SCENIC AND RECREATIONAL VALUES
(WITHIN 0.25 MILE OF WATERWAY)
-Diverse scenic values including a wide variety of vegetation, color, and interesting land forms
-High quality recreation opportunities, especially for boating and fishing


Wild and Scenic Rivers Review
North Fork of the John Day River
Figure A3. Segments 2.05-2.09.
LEGEND
Oustandingly Remarkable Value
(labeled by type and description)
Project waterway
Roads
LAND OWNERSHIP
BLM
Forest Service
National Park
Private
State
Base Map is Slickear Mountain,
OR 1:24,000 USGS Quadrangle
1:24,000
0 250 500 1,000 Meters
0 750 1,500 3,000 Feet
N
W
E
S
FISHERIES (WITHIN WATERWAY)
Important contributor to the total population
of Middle Columbia summer steelhead trout
SCENIC AND RECREATIONAL VALUES
(WITHIN 0.25 MILE OF WATERWAY)
-Diverse scenic values including a wide variety of vegetation, color,
and interesting land forms
-High quality recreation opportunities, especially for boating and fishing
Segment 2.09
Segment 2.08
Segment 2.07
Segment 2.06
Segment 2.05
Ditch
Creek
Wrentle
Slickear
FORK
MIDDLE
FORK


Wild and Scenic Rivers Review
North Fork of the John Day River
Figure A4. Segments 2.10-2.13.
LEGEND
LAND OWNERSHIP
Oustandingly Remarkable Value (labeled by type and description)
Project waterway
Roads
BLM
Forest Service
National Park
Private
State
Base Maps are Ritter and Slickear Mountain, OR 1:24,000 USGS Quadrangles
1:24,000
0 265 530 1,060 Meters
0 750 1,500 3,000 Feet
N
W
E
S
FISHERIES (WITHIN WATERWAY)
Important contributor to the total population of Middle Columbia summer steelhead trout
SCENIC AND RECREATIONAL VALUES
-Diverse scenic values including a wide variety of vegetation, color, and interesting land forms.
-High quality recreation opportunities, especially for boating and fishing
Segment 2.10
Segment 2.11
Segment 2.12
Segment 2.13
UMATILLA NATIONAL FOREST
MORROW CO
GRANT CO
Potamus Ridge
Deer Creek
Monkey Creek
Wrightman
Canyon
RIVER


Wild and Scenic Rivers Review
North Fork of the John Day River
Figure A5. Segment 2.13.
LEGEND
Oustandingly Remarkable Value (labeled by type and description)
Project waterway
Roads
LAND OWNERSHIP
BLM
Forest Service
National Park
Private
State
Base Maps are Ritter and Thompson Flat, OR 1:24,000 USGS Quadrangles
1:24,000
0 250 500 1,000 Meters
0 750 1,500 3,000 Feet
N
W
E
S
FISHERIES (WITHIN WATERWAY)
Important contributor to the total population of Middle Columbia summer steelhead trout
SCENIC AND RECREATIONAL VALUES
-Diverse scenic values including a wide variety of vegetation, color, and interesting land forms.
-High quality recreation opportunities, especially for boating and fishing
MORROW CO
UMATILLA CO
GRANT CO
Zion Scope
Schoolcraft Creek
Backbone
Stony
Zion
JOHN DAY RIVER
NORTH FORK
Burn Cabin
Skull
Creek
Deer


Wild and Scenic Rivers Review
North Fork of the John Day River
Figure A6. Segments 2.13 and 2.14.
LEGEND
LAND OWNERSHIP
Oustandingly Remarkable Value (labeled by type and description)
Project waterway
Roads
BLM
Forest Service
National Park
Private
State
Base Maps are Deerhorn Creek and Meadow Brook Summit, OR 1:24,000 USGS Quadrangles
1:24,000
0 250 500 1,000 Meters
0 750 1,500 3,000 Feet
N
W
E
S
FISHERIES (WITHIN WATERWAY)
Important contributor to the total population of Middle Columbia summer steelhead trout
UMATILLA CO
GRANT CO
Segment 2.14
Segment 2.13
SCENIC AND RECREATIONAL VALUES
(WITHIN 0.25 MILE OF WATERWAY)
-Diverse scenic values including a wide variety of vegetation, color, and interesting land forms
-High quality recreation opportunities, especially for boating and fishing


Wild and Scenic Rivers Review
North Fork of the John Day River
Figure A7. Segments 2.14, 2.15, and 2.16.
LEGEND
Oustandingly Remarkable Value (labeled by type and description)
Project waterway
Roads
LAND OWNERSHIP
BLM
Forest Service
National Park
Private
State
Base Maps are Deerhorn Creek and Meadow Brook Summit, OR 1:24,000 USGS Quadrangles
1:24,000
0 250 500 1,000 Meters
0 750 1,500 3,000 Feet
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W
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UMATILLA NATIONAL FOREST
FISHERIES (WITHIN WATERWAY)
Important contributor to the total population of Middle Columbia summer steelhead trout
Segment 2.15
Segment 2.14
Segment 2.16
SCENIC AND RECREATIONAL VALUES
-Diverse scenic values including a wide variety of vegetation, color, and interesting land forms.
-High quality recreation opportunities, especially for boating and fishing

ATTACHMENT B

RIVER SEGMENT NARRATIVE TABLE

June 11, 2006

ATTACHMENT B: RIVER SEGMENT NARRATIVE TABLE

Table B1. River Segment Narrative Table

River Segment Unique ID	River Name	Township Range and Section and Quad Name	Start River Mile	End River Mile	Length (Miles)	Free Flowing	BLM Eligible	List of ORVs	Tentative Classification/ ORV Description
1.01	Potamus Creek	T 7S, R 29E, Sec. 6, 7 Slickear Mountain	0.40	1.28	0.89	YES	NO	NONE	NON-ELIGIBLE
1.02	Potamus Creek	T 7S, R 29E, Sec. 6; T 6S, R 29E, Sec. 31, 32 Lake Penland, Slickear Mountain	1.30	3.63	2.33	YES	NO	NONE	NON-ELIGIBLE
2.01	North Fork of the John Day	T8S, R28E, Sec. 17, 20 Johnny Cake Mountain, Monument	20.43	21.94	1.51	YES	YES	Scenic Recreation Fisheries	**Recreational River Area** due to a highly visible and well-traveled road parallel to river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality recreation (boating and fishing) opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.02	North Fork of the John Day	T8S, R28E, Sec. 4, 5, 8, 9 Johnny Cake Mountain, Slickear Mountain	25.09	26.98	1.89	YES	YES	Scenic Recreation Fisheries	**Scenic River Area** due to largely undeveloped shorelines and parallel road receives little use and is generally well screened from river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality boating and fishing opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.

Table B1. River Segment Narrative Table									
River Segment Unique ID	**River Name**	**Township Range and Section and Quad Name**	**Start River Mile**	**End River Mile**	**Length (Miles)**	**Free Flowing**	**BLM Eligible**	**List of ORVs**	**Tentative Classification/ ORV Description**
2.03	North Fork of the John Day	T7S, R28E, Sec. 33 Slickear Mountain	27.08	27.86	0.78	YES	YES	Scenic Recreation Fisheries	**Scenic River Area** due to largely undeveloped shorelines and parallel road receives little use and is generally well screened from river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality boating and fishing opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.04	North Fork of the John Day	T7S, R28E, Sec. 34 Slickear Mountain	27.99	28.64	0.66	YES	YES	Scenic Recreation Fisheries	**Scenic River Area** due to largely undeveloped shorelines and parallel road receives little use and is generally well screened from river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality boating and fishing opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.05	North Fork of the John Day	T7S, R28E, Sec. 34 Slickear Mountain	29.19	29.73	0.55	YES	YES	Scenic Recreation Fisheries	**Scenic River Area** due to largely undeveloped shorelines and parallel road receives little use and is generally well screened from river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality boating and fishing opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.

Table B1. River Segment Narrative Table

River Segment Unique ID	River Name	Township Range and Section and Quad Name	Start River Mile	End River Mile	Length (Miles)	Free Flowing	BLM Eligible	List of ORVs	Tentative Classification/ ORV Description
2.06	North Fork of the John Day	T8S, R28E, Sec. 1 Slickear Mountain	30.59	31.06	0.47	YES	YES	Scenic Recreation Fisheries	**Scenic River Area** due to largely undeveloped shorelines and parallel road receives little use and is generally well screened from river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality boating and fishing opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.07	North Fork of the John Day	T7S, R29E, Sec. 31 Slickear Mountain	31.41	31.79	0.38	YES	YES	Scenic Recreation Fisheries	**Scenic River Area** due to largely undeveloped shorelines and parallel road receives little use and is generally well screened from river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality boating and fishing opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.08	North Fork of the John Day	T7S, R29E, Sec. 30 Slickear Mountain	32.08	32.88	0.80	YES	YES	Scenic Recreation Fisheries	**Scenic River Area** due to largely undeveloped shorelines and parallel road receives little use and is generally well screened from river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality boating and fishing opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.

Table B1. River Segment Narrative Table									
River Segment Unique ID	**River Name**	**Township Range and Section and Quad Name**	**Start River Mile**	**End River Mile**	**Length (Miles)**	**Free Flowing**	**BLM Eligible**	**List of ORVs**	**Tentative Classification/ ORV Description**
2.09	North Fork of the John Day	T7S, R29E, Sec. 19 Slickear Mountain	34.37	35.21	0.84	YES	YES	Scenic Recreation Fisheries	**Scenic River Area** due to largely undeveloped shorelines and parallel road receives little use and is generally well screened from river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality boating and fishing opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.10	North Fork of the John Day	T7S, R29E, Sec. 7, 18 Slickear Mountain	36.72	38.50	1.78	YES	YES	Scenic Recreation Fisheries	**Scenic River Area** due to largely undeveloped shorelines and parallel road receives little use and is generally well screened from river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality boating and fishing opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.11	North Fork of the John Day	T7S, R29E, Sec. 7 Slickear Mountain	39.05	39.33	0.28	YES	YES	Scenic Recreation Fisheries	**Recreational River Area** due to a highly visible and well-traveled road parallel to river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality recreation (boating and fishing) opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.

Table B1. River Segment Narrative Table

River Segment Unique ID	River Name	Township Range and Section and Quad Name	Start River Mile	End River Mile	Length (Miles)	Free Flowing	BLM Eligible	List of ORVs	Tentative Classification/ ORV Description
2.12	North Fork of the John Day	T7S, R29E, Sec. 6, 7, 8 Slickear Mountain	39.40	40.65	1.25	YES	YES	Scenic Recreation Fisheries	**Recreational River Area** due to a highly visible and well-traveled road parallel to river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality recreation (boating and fishing) opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.13	North Fork of the John Day	T7S, R29E, Sec. 1, 2, 3, 4, 9, 10, 11; T7S, R30E, Sec. 4, 5, 6 Meadow Brook Summit, Ritter, Slickear Mountain	41.49	49.28	7.79	YES	YES	Scenic Recreation Fisheries	**Recreational River Area** due to a highly visible and well-traveled road parallel to river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality recreation (boating and fishing) opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.14	North Fork of the John Day	T7S, R30E, Sec. 2, 3, 4; T6S, R30E, Sec. 35, 36 Deerhorn Creek, Meadow Brook Summit	49.55	53.44	3.89	YES	YES	Scenic Recreation Fisheries	**Recreational River Area** due to a highly visible and well-traveled road parallel to river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality recreation (boating and fishing) opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.

Table B1. River Segment Narrative Table									
River Segment Unique ID	**River Name**	**Township Range and Section and Quad Name**	**Start River Mile**	**End River Mile**	**Length (Miles)**	**Free Flowing**	**BLM Eligible**	**List of ORVs**	**Tentative Classification/ ORV Description**
2.15	North Fork of the John Day	T6S, R30E, Sec. 36 Deerhorn Creek	53.86	53.99	0.13	YES	YES	Scenic Recreation Fisheries	**Recreational River Area** due to a highly visible and well-traveled road parallel to river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality recreation (boating and fishing) opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
2.16	North Fork of the John Day	T6S, R31E, Sec. 29, 30, 31, 32 Deerhorn Creek	54.12	56.67	2.55	YES	YES	Scenic Recreation Fisheries	**Recreational River Area** due to a highly visible and well-traveled road parallel to river. Diverse scenic values include a wide variety of vegetation, color, and interesting land forms. High quality recreation (boating and fishing) opportunities. Important contributor to Mid Columbia steelhead trout, a threatened species.
3.01	Indian Creek	T14S, R33E, Sec. 10 Strawberry Mountain	6.29	6.81	0.52	YES	NO	NONE	NON-ELIGIBLE
4.01	Little Pine Creek	T14S, R32E, Sec. 6 John Day	2.05	2.41	0.36	NO	NO	NONE	NON-ELIGIBLE
4.02	Little Pine Creek	T14S, R32E, Sec. 7 Canyon Mountain, John Day	2.80	3.06	1.06	YES	NO	NONE	NON-ELIGIBLE
5.01	Bridge Creek	T10S, R20E, Sec. 3 Painted Hills	0.20	0.50	0.30	YES	NO	NONE	NON-ELIGIBLE
5.02	Bridge Creek	T10S, R20E, Sec. 2, 11, 13, 14, 24 Painted Hills	0.55	5.06	4.51	YES	NO	NONE	NON-ELIGIBLE

Table B1. River Segment Narrative Table

River Segment Unique ID	River Name	Township Range and Section and Quad Name	Start River Mile	End River Mile	Length (Miles)	Free Flowing	BLM Eligible	List of ORVs	Tentative Classification/ ORV Description
5.03	Bridge Creek	T11S, R21E, Sec. 5 Sutton Mountain	8.31	8.46	0.15	YES	NO	NONE	NON-ELIGIBLE
5.04	Bridge Creek	T11S, R21E, Sec. 5 Sutton Mountain	8.76	9.18	0.42	YES	NO	NONE	NON-ELIGIBLE
5.05	Bridge Creek	T11S, R21E, Sec. 5, 8, 9, 16 Mitchell, Sutton Mountain	9.33	12.70	3.37	YES	NO	NONE	NON-ELIGIBLE
5.06	Bridge Creek	T11S, R21E, Sec. 21, 26, 27, 28, 35 Mitchell	13.58	16.78	3.20	YES	NO	NONE	NON-ELIGIBLE
6.01	Girds Creek	T10S, R21E, Sec. 11, 12, 13, 14 Sutton Mountain	1.10	2.21	2.11	YES	NO	NONE	NON-ELIGIBLE
7.01	Bear Creek	T10S, R20E, Sec. 35; T11S, R20E, Sec. 2, 3 Painted Hills	1.82	3.87	2.05	YES	NO	NONE	NON-ELIGIBLE
8.01	Stony Creek	T7S, R29E, Sec. 1, 2; T6S, R29E, Sec. 36; T6S, R30E, Sec. 19, 30, 31 Ritter, Thompson Flat	0.00	3.88	3.88	YES	NO	NONE	NON-ELIGIBLE
8.02	Stony Creek	T6S, R30E, Sec. 18, 19 Thompson Flat	3.88	5.15	1.27	YES	NO	NONE	NON-ELIGIBLE
8.03	Stony Creek	T6S, R30E, Sec. 18 Thompson Flat	5.15	5.83	0.68	YES	NO	NONE	NON-ELIGIBLE
9.01	Jericho Creek	T6S, R30E, Sec. 23, 25, 26 Deerhorn Creek	0.19	2.45	2.26	YES	NO	NONE	NON-ELIGIBLE

Table B1. River Segment Narrative Table									
River Segment Unique ID	**River Name**	**Township Range and Section and Quad Name**	**Start River Mile**	**End River Mile**	**Length (Miles)**	**Free Flowing**	**BLM Eligible**	**List of ORVs**	**Tentative Classification/ ORV Description**
10.01	Big Wall Creek	T7S, R28E, Sec. 31; T7S, R27E, Sec. 25, 26, 27, 28, 34, 36 Johnny Cake Mountain, Turner Mountain	0.55	6.79	6.24	YES	NO	NONE	NON-ELIGIBLE
11.01	Little Wall Creek	T7S, R28E, Sec. 18, 19, 30; T7S, R27E, Sec. 13 Johnny Cake Mountain	1.02	4.72	3.70	YES	NO	NONE	NON-ELIGIBLE
11.02	Little Wall Creek	T7S, R27E, Sec. 13 Johnny Cake Mountain	4.92	5.45	0.53	YES	NO	NONE	NON-ELIGIBLE
12.01	Ditch Creek	T7S, R28E, Sec. 10, 14, 15, 23, 24 Slickear Mountain	0.83	5.09	4.26	YES	NO	NONE	NON-ELIGIBLE
13.01	Cottonwood Creek	T12S, R26E, Sec. 32 Day Basin	1.99	2.84	0.85	YES	NO	NONE	NON-ELIGIBLE
13.02	Cottonwood Creek	T13S, R26E, Sec. 7 Day Basin	4.01	4.31	0.30	YES	NO	NONE	NON-ELIGIBLE
13.03	Cottonwood Creek	T13S, R26E, Sec. 18 Day Basin	5.49	5.55	0.06	YES	NO	NONE	NON-ELIGIBLE
13.04	Cottonwood Creek	T13S, R26E, Sec. 18 Day Basin	5.66	5.68	0.02	YES	NO	NONE	NON-ELIGIBLE
13.05	Cottonwood Creek	T13S, R26E, Sec. 19 Day Basin	7.50	7.52	0.02	YES	NO	NONE	NON-ELIGIBLE
14.01	Wall Creek	T8S, R28E, Sec. 7 Quad: Johnny Cake Mountain	0.82	1.33	0.51	YES	NO	NONE	NON-ELIGIBLE

Table B1. River Segment Narrative Table

River Segment Unique ID	River Name	Township Range and Section and Quad Name	Start River Mile	End River Mile	Length (Miles)	Free Flowing	BLM Eligible	List of ORVs	Tentative Classification/ ORV Description
14.02	Wall Creek	T8S, R28E, Sec. 6 Johnny Cake Mountain	1.60	1.74	0.14	YES	NO	NONE	NON-ELIGIBLE
14.03	Wall Creek	T8S, R28E, Sec. 6 Johnny Cake Mountain	1.88	2.51	0.63	YES	NO	NONE	NON-ELIGIBLE
15.01	Mallory Creek	T6S, R29E, Sec. 31; T7S, R29E, Sec. 6, 7 Lake Penland, Slickear Mountain	0.00	3.08	3.08	YES	NO	NONE	NON-ELIGIBLE
16.01	Graves Creek	T7S, R28E, Sec. 1, 12; T7S, R29E, Sec. 7 Slickear Mountain	0.00	3.22	3.22	YES	NO	NONE	NON-ELIGIBLE
17.01	Rudio Creek	T10S, R26E, Sec. 12, 13 Miller Flat	6.91	7.42	0.51	YES	NO	NONE	NON-ELIGIBLE
17.02	Rudio Creek	T10S, R26E, Sec. 13, 24 Miller Flat	8.00	9.09	1.09	YES	NO	NONE	NON-ELIGIBLE
17.03	Rudio Creek	T10S, R26E, Sec. 25 Miller Flat	9.36	9.70	0.34	YES	NO	NONE	NON-ELIGIBLE
17.04	Rudio Creek	T10S, R26E, Sec. 36 Miller Flat	10.70	11.65	0.95	YES	NO	NONE	NON-ELIGIBLE
17.05	Rudio Creek	T11S, R27E, Sec. 6 Miller Flat	12.73	13.10	0.37	YES	NO	NONE	NON-ELIGIBLE
18.01	Jackknife Creek	T3S, R18E, Sec. 10, 11, 14, 15, 16, 21	0.00	3.47	3.47	YES	NO	NONE	NON-ELIGIBLE
18.02	Jackknife Creek	T3S, R18E, Sec. 20, 29	3.88	5.54	1.66	YES	NO	NONE	NON-ELIGIBLE
18.03	Jackknife Creek	T3S, R18E, Sec. 31	6.48	6.72	0.24	YES	NO	NONE	NON-ELIGIBLE

Table B1. River Segment Narrative Table									
River Segment Unique ID	**River Name**	**Township Range and Section and Quad Name**	**Start River Mile**	**End River Mile**	**Length (Miles)**	**Free Flowing**	**BLM Eligible**	**List of ORVs**	**Tentative Classification/ ORV Description**
18.04	Jackknife Creek	T4S, R18E, Sec. 6	7.23	7.53	0.31	YES	NO	NONE	NON-ELIGIBLE
18.05	Jackknife Creek	T4S, R18E, Sec. 18	9.22	9.77	0.55	YES	NO	NONE	NON-ELIGIBLE
19.01	Ferry Creek	T2S, R18E, Sec. 24	0.00	0.18	0.19	YES	NO	NONE	NON-ELIGIBLE
19.02	Ferry Creek	T2S, R19E, Sec. 19	0.47	1.23	0.76	YES	NO	NONE	NON-ELIGIBLE
19.03	Ferry Creek	T2S, R19E, Sec. 29, 32	2.07	3.82	1.75	YES	NO	NONE	NON-ELIGIBLE

ATTACHMENT C

MANAGEMENT OF BLM-ADMINISTERED PUBLIC LANDS WITHIN THE JOHN DAY BASIN RESOURCE MANAGEMENT PLAN PLANNING AREA THAT MEET THE WILD AND SCENIC RIVERS ELIGIBILITY CRITERIA

June 11, 2006

ATTACHMENT C: MANAGEMENT OF WATERWAYS WITHIN THE JOHN DAY BASIN RESOURCE MANAGEMENT PLAN PLANNING AREA THAT MEET THE WILD AND SCENIC RIVERS ELIGIBILITY CRITERIA

The recommendations for interim protection measures described in this document are meant to provide temporary or interim protection of the Wild and Scenic Rivers (WSR) values on eligible waterway areas prior to the completion of the John Day Basin Resource Management Plan (RMP). Included are management objectives, management actions, and appropriate allocations of land and resource uses that would maintain the outstandingly remarkable values and tentative classifications identified for the North Fork John Day River. Pursuant to the WSR Act of 1968, as amended, until the public reviews are completed and final decisions are made on WSR eligibility determinations, no uses of the reviewed Bureau of Land Management (BLM)-administered public land surfaces (public lands) will be authorized which could impair any outstandingly remarkable value they may contain, or would otherwise reduce or destroy their potential eligibility classification for consideration for inclusion in the national WSR system. In general, management requirements for river or river segments that are found eligible for consideration as components of the national WSR system are the same that apply to designated and study rivers (BLM 1993).

I. WILD AND SCENIC RIVERS REVIEW PROCESS

In conducting the WSR review process, application of the WSR eligibility criteria and determining the tentative WSR classifications focused on the public lands within a one-half mile wide corridor along the reviewed river segment (i.e., approximately one-quarter mile wide along each bank of the waterway along the length of the review segments). The public lands within and adjacent to this corridor will be considered in future site specific, activity or management implementation planning to fulfill the stated management objective.

The reviewed segments of Bear, Big Wall, Bridge, Cottonwood, Ditch, Ferry Canyon, Graves, Indian, Jericho, Little Pine, Little Wall, Mallory, Potamus, Rudio, and Stony creeks were determined not to meet the WSR eligibility criteria and are dropped from further consideration. Public lands along the reviewed segments of the North Fork John Day River were found to meet the WSR eligibility criteria to be given further consideration for inclusion in the national WSR system. Determinations on the suitability of inclusion for this river have not been made at this time, but will occur as part of the John Day Basin RMP planning process.

II. MANAGEMENT OBJECTIVE

The management objective for the waterways that meet the WSR eligibility criteria is to maintain or enhance their outstandingly remarkable values and WSR classification, until their eligibility determinations are superseded (BLM 1993). The interim protection measures for eligible waterways in the John Day Basin RMP planning area apply only to the waterway corridor which extends the length of the identified waterway segments and includes the waterway area, its immediate

environment, and an average of no more than one-quarter mile (1,320 feet) from the ordinary high water mark on both sides of the waterway. This boundary is preliminary and, by Section 3(b) of the WSR Act, may vary on either side of the waterway and be narrower or wider as long as the total corridor width averages no more than 320 acres (half of a mile or 2,640 feet wide) per river mile, and can be delineated by legally identifiable lines (e.g., survey or property lines) or some form of on-the-ground physical feature (e.g., canyon rims, roads, etc.) which provide the basis for protecting the waterway's outstandingly remarkable values. Final boundary delineation will be made if and when Congress decides to designate the waterway segments under review.

North Fork John Day River

Sixteen segments of the North Fork John Day River through public lands (including 25.55 miles of the river) were found to meet the WSR eligibility criteria to be given further consideration for inclusion in the national WSR system. Nine segments (totaling 8.15 miles) of the river are tentatively classified as scenic and seven segments (totaling 17.40 miles) are tentatively classified as recreational. All segments are designated as Accessible Natural River Areas as part of the North Fork John Day River Scenic Waterway, as designated in 1988. Current management under this designation (OAR 736-040-0066) is compatible with management under the WSR Act (see BLM 2000).

Management of BLM lands along the North Fork John Day River in the review section is currently covered under the John Day River Management Plan, Two Rivers, and John Day Resource Management Plan Amendments (BLM 2001). These plans are consistent with the protection of outstandingly remarkable values identified along the North Fork John Day River.

The North Fork John Day River is also managed under the Oregon State Scenic Waterway System as identified under the Scenic Waterways Act (ORS 390.805 to 390.925). Management under this system is consistent with the management of outstandingly remarkable values. As with wild and scenic rivers, scenic waterways designations cover the river and related adjacent lands within one-quarter mile of the bank on either side of the river. Some management standards apply to all scenic waterways, while specific rules are also developed for each river during the management planning process. All such rules are aimed at managing development within the scenic waterway corridor to protect the scenic beauty, fish and wildlife, scientific and recreation features of the river (OAR 736-040-0020).

Interim protective measures aimed at protecting outstandingly remarkable scenic values:

The study segment of the North Fork John Day is currently managed as an Accessible Natural River Area under the Oregon State Scenic Waterway System, which is administered by the Oregon Parks and Recreation Department. Management of an Accessible Natural River Area includes the protection or enhancement of the river's essentially primitive scenic character, while allowing compatible public outdoor recreation use (OAR 736-040-0040(1)(e)(B)). General rules and regulations governing land management on all scenic waterways that protects scenic values is presented in OAR 736-040-0035.These general management directions, in addition to specific

management actions identified in OAR 736-040-0066(1) that apply to the North Fork John Day, either meet or exceed the management requirements for protecting outstandingly remarkable scenic values identified in BLM Manual 8351. No additional protective measures are thus recommended at this time.

Protective measures identified OAR 736-040-0066(1) that currently protect outstandingly remarkable scenic values along the North Fork John Day River, including the 16 segments that flow through public lands, are as follows:

(D) New structures and associated improvements shall be totally screened from view from the river by topography and/or vegetation, except as provided under OAR 736-040-0030(5), and except those minimal facilities needed for public outdoor recreation or resource protection. If inadequate topographic or vegetative screening exists on the site, the structure or improvement may be permitted if native vegetation can be established to provide total screening of the proposed structure or improvement within a reasonable time (4–5 years). The condition of "total screening," as used in Section (1) of this rule, shall consist of adequate topography and/or density and mixture of native evergreen and deciduous vegetation to totally obscure (100%) the subject improvement.

(E) Commercial public service facilities, including resorts and motels, lodges and trailer parks which are visible from the river, shall not be permitted.

(F) New mining operations, except recreational placer mining and recreational prospecting, as those terms are defined and used in ORS 390.835, and similar improvements, shall be permitted only when they are totally screened from view from the river by topography and/or vegetation. If inadequate topographic or vegetative screening exists to totally screen the proposed mining site, the mining operation may be permitted if native vegetation can be established to provide total screening of the proposed mining site within a reasonable time (4–5 years).

(G) New roads may be permitted only when totally screened from view from the river by topography and/or vegetation. If inadequate topographic or vegetative screening exists to totally screen the proposed road, the road may be permitted if acceptable topography can be created or road design techniques used to totally screen the road at the time of construction or native vegetation can be established to provide total screening of the proposed road within a reasonable time (4–5 years).

(H) Where existing roads are visible from the river, major extensions, realignments, or upgrades to existing roads shall not be permitted. Necessary minor road improvements shall be substantially screened from view from the river. If inadequate topography or vegetation exists to substantially screen the road improvement, the road improvement may be permitted if acceptable topography can be created or road design techniques used to substantially screen the road at the time of construction or native vegetation can be established to provide substantial screening of the road improvement within a reasonable

time (4–5 years). The condition of "substantial screening," as used in Section (1) of this rule, shall consist of adequate topography and/or density and mixture of native, evergreen and deciduous vegetation to substantially obscure (at least 75%) the subject improvement. When an existing road is regraded, no side cast into or visible from the river shall be permitted. Excess material shall be hauled to locations out of view from the river.

(I) Visible tree harvest or other vegetation management may be permitted provided that:
  (A) The operation complies with the relevant Forest Practices Act rules;
  (B) Harvest and management methods with low visual impact are used;
  (C) The harvest or vegetation management does not degrade the riparian buffer of any waterway; and
  (D) The harvest or vegetation management is designed to enhance the scenic view within a reasonable time (5–10 years). For the purposes of this paragraph, "enhance" means to benefit forest ecosystem function and vegetative health by optimizing forest stand densities and vegetative composition, fostering forest landscape diversity and promoting sustainable forest values.

(J) Improvements needed for public recreation use or resource protection may be visible from the river, but shall be primitive in character and designed to blend with the natural character of the landscape.

(K) Proposed utility facilities shall share existing utility corridors, minimize any ground and vegetation disturbance, and employ non-visible alternatives when reasonably possible.

(L) Whenever the standards of OAR 736-040-0035 and section (1), subsections (c) through (k) of this rule are more restrictive than Grant County's or Umatilla County's Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

Interim protective measures aimed at protecting outstandingly remarkable recreational values:

Outstandingly remarkable recreation values on the North Fork John Day River are partially protected by measures currently applied to scenic values, as identified above. These protective measures help preserve the scenic quality of the river corridor, an essential part of the visitor experience that draws users from outside the area.

Recreation use on public lands along the North Fork John Day has been relatively low, but use has been increasing steadily over the past decade due to the scenic quality, low use, and good fishing (BLM 2000). Such increases may impact the feeling of solitude and remoteness within the river corridor. Recreation facilities on public lands on the North Fork John Day River are limited to two information kiosks and boater registration boxes. Registration is currently voluntary and thus does not allow for accurate estimates on total use. The BLM may consider mandatory registration to help determine use levels. A permit system is not necessary at this time; however, in depth, recreational use studies would help aid in determining any needs to

place limits on use levels deemed necessary to protect or enhance visitor experiences. Additional campsite studies could help determine the condition of campsites and need for improvements or restrictions.

In general, North Fork John Day River segments 2.02 to 2.10 that are recommended a tentative classification as Scenic should be managed for semi-primitive nonmotorized to semi-primitive motorized settings. Motorized vehicle use, including off-highway vehicles, could be permitted, although trespass through private property should not be allowed. The BLM should consider attaining a public easement that would allow easy access to public lands. A mix of access types should be available, including open roads, roads closed to motorized use, and walk-in or horseback opportunities in a few remote areas. Recreation developments such as additional kiosks or boater registration sites should not be built along this section of river to preserve its more natural appearance.

Segments 2.01 and 2.11 to 2.16 that are recommended a tentative classification as Recreational should be managed for roaded to rural settings. Motorized use should continue to be permitted, with OHV use permitted on designated trails. Road access should continue along all seven river segments. Additional recreation development sites may be permitted, including additional recreation kiosks, boater registration sites, as well as viewpoints, interpretive sites, and developed campgrounds and access sites/boat launch ramps. If a boat launch is developed, it should be located along the upstream-most river segment (segment 2.16) and include a boater registration box. This would allow for the gathering of more complete user data.

Interim protective measures aimed at protecting outstandingly remarkable fishery values:

Habitat problems affecting steelhead trout populations include irrigation diversions and cattle grazing. These activities modify river channels; remove riparian vegetation; block migration corridors; decrease summer flows, occasionally to complete dewatering; and increase summer water temperatures. Many populations have retreated to headwater areas because of these activities, causing extensive population fragmentation and declines in numbers. Management actions aimed at maintaining or increasing Middle Columbia Steelhead in the North Fork John Day River should thus be aimed at reducing these impacts to steelhead habitats.

As a threatened species, the Middle Columbia Steelhead are protected under the Endangered Species Act (ESA). Section 4(f) of the ESA requires that a recovery plan be developed and implemented for species listed as endangered or threatened under the statute. These plans must, at a minimum, contain (1) a description of site-specific management actions necessary to achieve the plan's goal for the conservation and survival of the species; (2) objective, measurable criteria which, when met, would result in a determination that the species be removed from the list; and (3) estimates of the time required and cost to carry out the measures needed to achieve the plan's goal and to achieve intermediate steps toward that goal.

Currently, a recovery plan for Oregon's Middle Columbia River Steelhead is in its draft stage. An early draft of a recovery plan identifies the conditions that have led to the listing of the

Middle Columbia steelhead and provides early recovery framework (Carmichael 2006). Limiting factors in the lower North Fork John Day River listed in that report include habitat diversity, sediment load, temperature, and key habitat quantity. Anthropogenic threats associated with these limiting factors are riparian disturbance, stream channelization and relocation, grazing, timber harvest, road building, irrigation withdrawals, mining, and dredging (NMFS 2004).

The above threats to steelhead populations in the North Fork of the John Day are currently managed under the John Day River Management Plan, Two Rivers, and John Day Resource Management Plan Amendments (BLM 2001); the John Day River Subbasin Plan and the Columbia River Anadromous Fish Restoration Plan (CRITFC 1996); Oregon Wild Fish Management Policy (OAR 635-07-525); Strategy for Salmon amendment to the Columbia River Basin Fish and Wildlife Program (Collette and Harrison 1992); and PACFISH (USFS and BLM 1995). Management emphasis of these plans and programs is to maintain or increase wild run populations of steelhead in the John Day Basin and restore watersheds and fish habitat. The State Scenic Waterway System Act also implements protection of steelhead trout within the North Fork Scenic Waterway through maintaining the river's free-flowing character in quantities necessary for steelhead migration and protecting migration corridor blockage due to the construction of dams, diversions, or other water impoundment facilities and excessive water withdrawals from irrigation and other domestic or agricultural use. Steelhead habitat is also protected from degradation of riparian areas along the river; the discharge of debris, silt, chemicals or other materials into the river from mining, prospecting, and dredging activities; and habitat disturbance from road construction and maintenance (ORS 390.835). Due to the extensive current management of steelhead trout in North Fork John Day River, no additional protective measures are suggested at this time.

ATTACHMENT D

LITERATURE CITED

June 11, 2006

ATTACHMENT D: LITERATURE CITED

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Appendix I-2: Documentation of Wild and Scenic River Eligibility for the North Fork John Day River

DOCUMENTATION OF ELIGIBILITY

Eligibility Assessment for North Fork John Day River (NFJDR) Segments Identified For Possible Inclusion as Components of the National Wild and Scenic Rivers System

SECTION B

River Segment	Description of Values – Either Outstandingly Remarkable (*) or Less than Outstandingly Remarkable
North Fork John Day River – Segment A – Camas Creek to Mallory Creek	* **Scenic ORV** – The river flows through extremely steep hillsides with rock outcroppings and a variety of vegetation types, including stands of ponderosa pine, grassy meadows, and lush riparian vegetation. * **Recreation ORV** - The NFJDR is unique as it offers semi-primitive boating opportunities on a relatively peaceful river, perfect for the novice boater and those desiring a family oriented trip. These recreation opportunities, specifically those related to boating and fishing. * **Fishery ORV** - . Due to the existing viable population of threatened steelhead trout, and connectivity to upstream populations currently provided protection under the National WSR system, the North Fork John Day contains fishery ORVs. **Wildlife** - The habitat adjacent to the river accommodates a population of Lewis' woodpeckers, which is listed on the Oregon Sensitive Species List as critical. However, these populations are not large enough to be considered at a regional or national level and thus cannot be considered outstandingly remarkable. **Historical/Cultural**: A number of historic (i.e., 50 years older or older) structures occur within the ½-mile boundary of the river on BLM lands; however, these are not known to be unique or to have any significance. Cultural and historic resources are not considered outstandingly remarkable. **Geologic**: No rare, unusual, or unique geologic features, processes, or phenomena exist in this river segment. **Similar Values**: The North Fork John Day River contains no other significant hydrological, paleontological, botanical, scientific, or ecological resources that are waterway related.
North Fork John Day River – Segment B– Mallory Creek – RM 20.4	* **Scenic ORV** - The river flows through a wide valley with adjacent mountain peaks in clear view. This mix of landform, vegetation, water, and color results in notable or exemplary visual features and/or attractions within the geographic region. * **Recreation ORV** – Same as Segment A. * **Fishery ORV** - Same as Segment A. **Wildlife** - Same as Segment A. **Historical/Cultural** - Same. As Segment A **Geologic** - Same as Segment A. **Similar Values** - Same as Segment A.

DOCUMENTATION OF ELIGIBILITY

Eligibility Assessment for North Fork John Day River (NFJDR) Segments Identified For Possible Inclusion as Components of the National Wild and Scenic Rivers System

SECTION C

River Name	Free-Flowing Values		Outstandingly Remarkable Values [3/]							Potential Classification			Eligibility Determination	
	Y	N	a	b	c	d	e	f	g	Wild	Scenic	Recre-ation	Y	N
NFJDR Segment A (Camas Creek to Mallory Creek)	X		X	X		X					X	X	X	
NFJDR Segment B (Mallory Creek to River Mile 20.4)	X		X	X		X					X		X	

3/ (See Section B for description of values)
- a – Scenic
- b – Recreational
- c – Geological
- d – Fish
- e – Historical
- f – Cultural
- g – Other Similar Values

Christina M. Welch — 3/19/2008

Christina M. Welch / Central Oregon Resource Area — Date

Appendix I-3: Wild and Scenic River Draft Suitability Study for North Fork John Day River

Introduction

The process used by BLM to identify and evaluate river segments for inclusion into the National Wild and Scenic Rivers system is guided by the provisions of the Wild and Scenic Rivers Act and BLM planning guidance.

Section 5(d)(1) of the Act directs federal agencies to consider potential wild and scenic rivers in the land and water planning processes. To fulfill this requirement, the BLM inventories and evaluates rivers when it develops comprehensive resource management plans for public lands in a specified area.

An eligibility inventory was conducted during the data gathering stage of John Day Basin Resource Management Plan. Sixteen segments of the North Fork John Day River that flow through public lands were reviewed, totaling 25.55 miles. The shortest segment is 0.13 mile and the longest segment is 7.79 miles. All 16 segments are located within a section of the river that is 36.24 miles long, beginning along County Road 31, roughly 3 miles northeast from Monument in Section 23, T. 7 S., R. 28 E., in Grant County, and ending at the confluence of Camas Creek in Section 26, T. 6 S., R. 31 E., in Umatilla County. The 16 review segments through public lands make up 70.5 percent of this section of river.

In the fall of 2006, BLM released the Analysis of the Management Situation (AMS) and Preliminary Public Involvement document. The AMS included the June 11, 2006 Final Report of Potential Wild & Scenic Rivers in the John Day Basin Resource Management Planning Area. This final report identified the North Fork John Day River as eligible for further study in the land use plan.

This suitability report was written during the formulation of the Draft RMP.

Outstandingly Remarkable Values along the North Fork John Day River:

The Final Eligibility Report identified the following Outstandingly Remarkable Values (ORVs) for the North Fork John Day River in all studied segments:

Scenic values: The North Fork John Day River "flows through some of the finest scenery in Oregon" (BLM 2000, p. 110), which includes a river valley bordered by steep, rugged hillsides with rock outcroppings and a variety of vegetarian types, including stands of ponderosa pines and Douglas fir, grassy meadows, and scattered clumps of riparian vegetation. Views of adjacent mountain peaks are offered along some sections of the river. This mix of landform, vegetation, water, and color add to the visual values along the river.

While such features are not unique among rivers in the Blue Mountains ecoregion of northeastern Oregon, they are notable and of a quality to attract visitors from outside the area. The state of Oregon valued the scenic quality of the North Fork enough to include the entire study section in the State Scenic Waterway System under the Oregon Scenic Waterways Act (ORS 390.826). Only 18 other waterways and one lake in Oregon are afforded this protective status.

A BLM-maintained native surface road runs adjacent to the river from Hwy 395 to Potamus Creek, which occasionally can intrude on the scenic nature of the river, while, at the same time, provides easy access for visitors to view the scenery. The river corridor in this section is narrow and the hills rise over 2,000 feet, with dense strands of mixed conifer on north-facing slopes. The warmer south facing slopes are characterized by well spaced ponderosa pine, a few junipers, and a terraced grassy understory. A few houses and ranches are located along this section of the river.

A primitive road (with no public easement through private sections) located from Potamus Creek downstream to the confluence with Wall Creek, is less conspicuous and the scenery more primitive. Only a few structures and primitive roads are seen along this segment of the river, leaving much of the area in a natural appearing state. Here, the river flows through a wide valley with adjacent mountain peaks rising less than 2,000 feet. The area is mostly rangeland, with steep hillsides dotted with strands of ponderosa pine.

Recreation Values: The North Fork John Day offers numerous recreational opportunities, including boating, hunting, fishing, camping, hiking, sightseeing, watchable wildlife, recreational gold panning, nature study, and photography. The boating opportunities are particularly rare or unique in northeastern Oregon as visitors are offered opportunities for solitude and a natural environment with easily negotiated Class I & II rapids and multiple boat launch and take-out areas..

This access provides opportunities for trips that vary, from a few hours to multiple days. While the mainstem John Day, from Service Creek to Clarno, offers similar river rafting experiences (e.g., Class I & II rapids and numerous access points) the North Fork (from Dale to Monument, which encompasses the study section) is considered by some as having better scenery and whitewater (Cassady et al. 1994). The rafting season is generally limited to May and June with weather earlier and flow levels later in the season being limiting factors.

Boater registration data (albeit incomplete) collected between 1998 and 2005 documented that nearly one third of trip leaders traveled from outside of Oregon to float the river, while the majority of those coming from Oregon (all except one) traveled over 100 miles. This data suggest that visitors are willing to travel long distances to visit the river for recreational purposes.

Fish Values: All steelhead trout in the John Day River Basin are genetically grouped into the Middle Columbia Evolutionarily Significant Unit (ESU). Steelhead in this ESU were listed as threatened under the Endangered Species Act (ESA) on March 25, 1999 ([64 FR 14517], effective May 24, 1999, with threatened status reaffirmed on January 5, 2006). The John Day basin is included in the ESU.

The North Fork John Day including the 25.55 miles of river that flow through BLM land is an important contributor to the total population of Middle Columbia summer steelhead trout in the Middle Columbia ESU.

In addition, the North Fork John Day population of the Middle Columbia Summer Steelhead Species Management Unit meets all six criteria used to determine near-term sustainability (e.g., existing populations, distribution, abundance, productivity, reproductive independence, and hybridization; ODFW 2005). This includes the study segment as well as approximately 54 miles upstream from the study managed by USDA-Forest Service that are already part of the national WSR system.

The U.S. Forest Service WSR designation is partially due to possessing outstandingly remarkable fisheries values, including steelhead trout. The protection afforded by the upstream WSR designation adds to the integrity of the fisheries in the review segments and helps ensure that the biological needs (i.e., migration corridor) of the species are met.

Classification

At the same time that eligibility recommendations are made, rivers that meet the eligibility criteria are given a tentative classification (either wild, scenic, or recreational), as required by the WSR Act. Tentative classification is based on the type and degree of human development associated with waterway and adjacent lands as they exist at the time of the review. This classification, however, is a planning recommendation and is tentative to Congressional legislative determination.

The tentative classifications are further defined as follows:

- **Wild River Area** – Wild river areas are those where the rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America. Wild means undeveloped; roads, dams, or diversion works are generally absent from a one-quarter mile corridor on both sides of the river.
- **Scenic River Area** – Scenic river areas are those where the rivers or sections of rivers that are generally free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. Scenic does not necessarily mean the river corridor has to have scenery as an outstandingly remarkable value; however, it means the waterway or segment may contain more development (except for major dams or diversion works) than a wild segment and less development than a recreational segment. For example, roads may cross the river in places but generally do not run immediately parallel to it. In certain cases, if a parallel road is unpaved and well-screened from the river by vegetation, a hill, etc., it could qualify for scenic river area classification.
- **Recreational River Area** – Recreational river areas are those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. Parallel roads or railroads, or the existence of small dams or diversions can be allowed in this classification. A recreational river area classification does not imply that the river or section of river will be managed or have priority for recreational use or development.

The North Fork WSR Eligibility Report recommended;

1. BLM public lands from the Wrightman County Road to Wall Creek (river segments 2.02-2.10) have a tentative classification as Scenic and should be managed for semi-primitive non-motorized, to semi-primitive motorized settings.
2. BLM public lands West of Highway 395 to the Wrightman County Road, and just upriver from Monument; (river segments 2.01 and 2.11 to 2.16) are recommended a tentative classification as Recreational and should be managed for roaded to rural settings.

Additional information describing the inventory, evaluation process and recommended tentative classification is in the Final Wild & Scenic River Eligibility report on a CD in the back page of the Analysis of the Management Situation for the John Day Basin Resource Management Plan.

The recommendations of this report are included in one or more RMP alternatives, to provide a range of management options to protect the ORVs of this river and also satisfy BLM guidance. The planning team considered the WSR Final Report information in developing different land management alternatives for the two river segments of the North Fork John Day River.

SUITABILITY

The final step in the river assessment process is the determination of suitability. BLM Manual 8351(BLM 1992) guidance identifies eight factors to answer when completing this study. Suitability determination results from a combined assessment of river attributes and other land uses associated with a river. Additional factors may be considered if applicable to a river segment.

Congressional legislation is required to actually designate a river as a federal Wild & Scenic River. The suitability evaluation does not automatically result in designation. If the suitability study determines that a river segment(s) is suitable for WSR designation, then BLM will make that recommendation to Congress. However, if the suitability study determines that a river segment(s) is not suitable, BLM would not recommend this river segment as suitable for Congressional WSR designation. This conclusion would be stated in the RMP, releasing it from further W&S review.

The following eight factors, identified in BLM Manual Section 8351, have been reviewed to determine the suitability for Wild and Scenic River status of the North Fork John Day River between Camas Creek and river mile 20.4 north of Monument.

1. Characteristics that do or do not make the river a worthy addition to the National System

The Eligibility Report for the North Fork John Day River determined that thus river has scenic quality, recreational opportunities and fisheries values that are Outstandingly Remarkable and make this river segment a worthy addition to the National WSR System. These values are summarized in the Eligibility Study.

2. The status of land and mineral ownership, use in the area, and associated or incompatible uses;

Rights-of-way: 1) Oregon Fish and Wildlife Commission Right of Way for public access on road and river area from Camas Creek to private land, just upriver from the Wrightman Canyon County Road. At this time the current landowner does not prevent public access across on the road across private land. There is, however no public right of way across this land and permission to cross may be revoked at any time. 2) Power/Phone line Right of Way(s) to several homes downriver from Camas Creek for power and telephone service.

Mining Claims and Mineral Leases: As of June, 2007, there are no known mineral, saleable or oil, gas or geothermal leases or activities on public, private or State Lands that would conflict with potential Wild & Scenic River designation on public lands along the North Fork John Day River, from its junction with Camas Creek at State Highway 395, downriver to Monument. There are several parcels adjacent to or near the river with mineral rights owned by private parties, Due to the relatively low mineral potential of the proposed WSR corridor the probability of mineral development and conflicts with WSR Outstandingly Remarkable values is low.

Livestock Grazing Status: Isolated tracts of public lands south of the North Fork John Day River near Monument have been grazed under BLM permit prior to the Oregon Land Exchange Act (OLEA). Range grazing allotments include Slick Ear, Neal Butte, Johnny Cake, Big Bend and North Fork. BLM has temporarily suspended grazing on these public lands until the JDBRMP is completed. Some lands north of Monument adjacent to the river that were owned prior to the exchange are still grazed.

Grazing has historically occurred on recently acquired BLM lands before BLM obtained ownership of these lands. After OLEA was completed, BLM decided to not authorize any grazing until the issue of authorizing grazing on acquired public lands is evaluated and decided in the JDBRMP. Grazing use and its potential effect on ORVs will be evaluated in this land use plan.

Fire/Fuels: The North Fork has been subject to wildfires over time. In 2001, the Monument Complex wildfire burned approximately 21,000 acres of public lands in Wall, Little Wall, Squaw, Cabin Creeks, Graves, Mallory, and Potamus Creeks, extending north into the Umatilla National Forest (FEMA report via Google). These values are summarized in the Eligibility portion of this report.

Other recent, but smaller fires have occurred in this area: Wall and Graves Creek, Little Wall Creek (2003), and Hunter Creek (2006). In 2007 a second Monument Fire Complex burned about 54,000 acres, up to the west bank of river between river miles 39 and 31 and both sides of the river between river miles 31 and 24.

Other: Scattered private/public land ownership exists from the Camas Creek to Wrightman County Road Bridge. The private land ownership pattern increases along the North Fork John Day River downriver, from the Wrightman Canyon county road. The outstandingly remarkable values that qualify this river segment as eligible for inclusion are not affected by the Skull Canyon bridge, or the Wrightman Canyon bridge; these bridges do not affect the free-flowing nature of the river.

3. Reasonably foreseeable potential uses of the land and related waters that would be enhanced, foreclosed, or curtailed if the area were included in the National System and values that would be foreclosed or diminished if the area were not designated;

Management consistent with wild and Scenic River status would maintain existing opportunities for fishing, big game hunting for deer and elk, rafting/kayaking/ canoeing, camping, wildlife observation, photography, and driving or riding ATV's for pleasure. Due to the restrictions associated with Wild and Scenic river status highly developed recreation opportunities would be precluded in the future on the North Fork of the John Day River.

Prior to BLM obtaining private lands through the Oregon Land Exchange Act of 2000 (OLEA) timber harvest and livestock grazing occurred on lands near the North Fork John Day River.
Existing and proposed management limits timber management to treatments to improve forest.health. Similarly grazing has been restricted to ensure the congressional objectives stated in the OLEA

No additional restrictions on livestock grazing, or timber harvest would result from Wild & Scenic River designation.

Existing private land uses and motorized access to private property are not expected to change if the North Fork were designated as a Wild & Scenic River. These uses will continue, regardless of what decision is made regarding WSR designation. WSR designation would have no direct impact on private lands but could impact future requests for either vehicle or utility access to private land in order to protect ORVs associated with Wild Aand Scenic River Status.

4. Federal, state, tribal, local, public, or other interest in designating or not designating the river;

The 1988 Omnibus Oregon Rivers Act designated a 54.1- mile segment of the North Fork John Day River, from its headwaters in the North Fork of the John Day Wilderness Area, to its confluence with Camas Creek.

By protecting lands adjacent to 25.5 miles the North Fork below Camas Creek designation of the BLM portion of the North Fork as a Wild and Scenic River would also help protect the outstandingly remarkable fish values associated with the Wild & Scenic River designation on U.S. Forest Service managed public lands upriver from Camas Creek.

BLM received several comments for and against WSR designation during the Scoping process for the John Day Basin Resource Management Plan. Comments for designation described this river as worthy of designation due to its scenic beauty, fisheries, and natural appearance. Comments against designation felt that designation restricted management and attracted more visitations resulting in resource degradation. Appendix 1 of this report contains public comment quotes during the 2006-7 BLM public scoping meetings; for and against WSR designation.

As noted above the State of Oregon valued the scenic quality of the North Fork enough to include the entire study section in the State Scenic Waterway System under the Oregon Scenic Waterways Act (ORS 390.826). State Scenic waterway guidance and the participation of the Oregon Department of Parks and Recreation are important components in protecting the integrity of outstandingly remarkable values.

Existing and future management of mining within the potential WSR corridor would rely upon restrictions of existing State Scenic waterway guidance, even if the state were to change guidance in the future, to protect scenic quality, and after the completion of the John Day RMP, visual resource management guidance and

Several tribes have participated in the John Day Basin Resource Management Plan planning process and have indicated concerns about preserving the fishery in the John Day River.

5. Estimated cost of acquiring necessary lands and interests in lands and administering the area, if designated;

Federal Wild and Scenic River Designation with a Recreation or Scenic classification from Camas Creek to public lands downriver from Wall Creek would not result in the need to acquire any additional lands to manage the ORVs on existing BLM public lands adjacent to the North Fork John Day River. BLM would consider acquisition of private lands and leases adjacent to this river only from willing sellers, to enhance manageability of the area.

Estimated costs would depend on location and acreage of private land. Funding for acquisition would be expected to come from Land & Water Conservation Act funding by Congress. No additional costs are anticipated from the management of the area as a Wild & Scenic River. BLM currently manages this river to protect scenic, fishery and recreation values.

6. Ability of the agency to manage and protect the river area or segment as a wild and scenic river or other means to protect the identified values other than wild and scenic river designation;

BLM management currently maintains or protects fishery ORVs through existing regulations to preserve and maintain habitat for special status fish (bull trout, and Steelhead), through the Endangered Species Act (ESA), Pac fish, and the proposed Aquatic Conservation Strategy in the John Day Basin Resource Management Plan.

Water quantity is protected through a 1986 instream water right held by the Oregon Department of Fish and Wildlife. Water quality is protected by the State of Oregon water quality regulations.
The Federal government can also exert federal water right laws to protect ORVs within a river;
"The designation of a river as a wild, scenic or recreational river under the Wild and Scenic Rivers Act of October 2, 1968, explicitly reserves sufficient unappropriated water to fulfill the purposes of the Act.

The BLM will use a variety of tools, authorities and strategies to achieve in-stream flow levels that support Wild and Scenic River values. These tools include: leasing (in the short term) and transferring existing BLM consumptive use rights to in-stream uses (in the long term); entering co-operative agreements with the State of Oregon, other agencies, and organizations for the purchase of water rights from willing sellers for transfer to in-stream uses.

If these other tools are not effective, BLM may quantify and assert the BLM's Federal reserved water right."
Recreation values for water-based recreation activities also benefit from in-stream flows for rafting, canoeing, kayaking, and fishing.

The amount of water reserved is the minimum amount necessary to fulfill the purposes of the Act. The amount of water reserved is the minimum amount necessary to protect the particular aesthetic, recreational, scientific, biotic, or historic features ('values') which led to the river's designation. The amount of flow reserved will vary on a case-by-case basis.

The John Day Basin RMP proposes a Visual Resource Management Class 2 for the North Fork John Day. Under this classification scenic quality ORV would receive a higher level of protection than under current management standards. A WSR designation would add weight and consideration to any decision regarding a proposed project within this river canyon which could be seen from the river or adjacent road.

Future project proposals such as timber harvests would require review for compliance with the WSR Act if the Camas- Wrightman Canyon and Wrightman Canyon to Monument river segments were designated as federal Wild and Scenic Rivers. Overall, the BLM would be able to manage and protect the river area with minimal effort.

7. Historical or existing rights that could be adversely affected with designation; and

The BLM has a responsibility to ensure tribal members satisfy their treaty rights and to maintain cultural practices on all public lands managed by BLM. Government-to-government consultation is part of the RMP process and on-going public land management necessary to ensure tribal rights to access and use resources and places

important to Native Americans are not affected. Wild & Scenic River designation would not affect or impair activities traditionally pursued by tribal members as they exercise their treaty rights and cultural practices.

Wild and Scenic river status would have no impact on historical or existing rights except as described in sections 3 and 4 above.

8. Other

BLM would work with private landowners to minimize conflicts or trespass with public use of this waterway. No other issues or concerns regarding suitability of this segment have been identified in the land use planning process.

Recommendation:

Based on my review of both the Eligibility Study and the information provided in this Suitability Study my preliminary recommendation is that the North Fork John Day River between River Mile 55 (Camas Creek) and River Mile 20.4 (four miles up river from monument) are Suitable for inclusion in the National Wild and Scenic Rivers System.

Christina M. Welch

Christina M. Welch, Field Manager
Central Oregon Resource Area
Prineville District, Bureau of Land Management

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2006-7 Public Comments Regarding Wild & Scenic River Issue John Day Basin Resource Management Plan

June 20, 2007

I. AMS Scoping Period Comments; Subject Source: SMA Special Management Areas

For WSR Designation;

* We support ONDA's proposal that BLM evaluate and recommend and recommend for designation as Wild & Scenic the North Fork John Day from Camas Creek to Monument. (292/14)

* Special management designations for suitable lands. Give careful consideration to management of roadless areas. Designate special resource management for Wild & Scenic River status to improve protective status retaining the natural values permanently for future generations. (18/6)

* Nominating the North Fork for Wild and Scenic River status would be consistent with previous BLM and U.S. Forest Service planning decisions to seek protection for lands between Service Creek and Tumwater Falls on the main John Day, as well as on the upper North Fork above Camas Creek. The designation would also assist the BLM's effectiveness in carrying out the provisions of the Oregon Land Exchange Act of 2000 because the agency has acquired a nearly contiguous block of public land along the river between Dale and Monument. The North Fork John Day is a valuable public asset for scenery, for resource protection, and for recreation, and nominating it for National Wild and Scenic River status would help accomplish the central goals of the planning process. (29/1)

* The new RMP should consider adding additional Wild and Scenic river designations. The existing 54 miles of the designated North Fork John Day River lies immediately upstream of river segment 7 (as described in the John Day River RMP), which now contains significantly more public land after recent acquisitions. This 41 mile segment is remote, forested and includes high scenic and wildlife values. According to the current John Day River RMP, this segment contains important habitat for elk, Lewis' woodpeckers and bald eagles. Steep, forested hillsides border the river. This section should be studied and considered for addition to the North Fork John Day Wild & Scenic River. (52/2)

* Please consider assessing the suitability of streams and rivers such as the North Fork John Day from Camas Creek to Monument for Wild and Scenic River status. (15/4)

* Please consider the North Fork of the John Day River from Camas Creek to Monument for Wild and Scenic status. (17/5); (pg. 55)

* Assess suitability of the North Fork John Day from Camas Creek to Monument for Wild and Scenic River Status. (21/4)

* Consider nominating streams and rivers such as North Fork John Day from Camas Creek to Monument for Wild and Scenic River Status. (27/6)

* Consider nominating streams and rivers such as North Fork John Day from Camas Creek to Monument for Wild and Scenic River Status. (30/5)

* The new RMP should consider adding additional Wild and Scenic river designations. The existing 54 miles of the designated North Fork John Day River lies immediately upstream of river segment 7 (as described in the John Day River RMP), which now contains significantly more public land after recent acquisitions. This 41 mile segment is remote, forested and includes high scenic and wildlife values. According to the current John Day River RMP, this segment contains important habitat for elk, Lewis' woodpeckers and bald eagles. Steep, forested hillsides border the river. This section should be studied and considered for addition to the North Fork John Day Wild and Scenic River. (49/2))

* The new RMP must address designating additional Wild and Scenic River areas. Newly acquired North Fork John Day lands should be inventoried for potential addition to the Wild & Scenic River System. The North Fork John Day River from Camas Creek to Monument, is one area that merits WSR designation. (49/6)

* You must consider nominating streams and rivers such as North Fork John Day from Camas Creek to Monument for Wild and Scenic River status in order to gain the most protection for this area. (54/6)

Against WSR Designation

* Do not add any Wild or Scenic rivers to the existing inventory and do not allow verbal cultural history as valid. (35/9)

* Designation of more Wild and Scenic Rivers will serve no purpose and in face is counter productive to keeping these streams in a healthy condition. Designation of these streams eliminate the ability to manage them. If at this current date, they still qualify for Wild and Scenic designation, it tells me we have been doing ok without this designation and can continue to do so thru proper management. (290/2)

* I am opposed to any additional designation of Wild & Scenic Rivers for the same reasons I am opposed to additional Wilderness designations...Don't take away your [management] options by designating them.... (No additional wording).

II. 2007 February and March Public Scoping Meetings*

(* public comments sorted by key words)

For WSR Designation;

* Wild and Scenic Rivers - Please consider for designation the North Fork John Day River between Wall and Camas Creek as well as BLM managed sections of Bridge Creek and Jackknife canyon. (pg.4)

Special designations (WSR, Wilderness, ACEC, etc.) attracts tourism opportunities for education; also attracts tourists. (pg. 55)

Against WSR Designation

* Designation [as Wild & Scenic River] does not save it, degrades it causes overuse from recreationists. Like overuse in Strawberry Mtn Wilderness, then it burned. It put in on the map for more people to visit. Same with wild & scenic rivers- overuse causes degration.

* Pototmus Cr. - Not qual'd for wild and scenic river spawning & rearing habitat. (pg. 11 & 55)

* WSR. Designation does not save it, degrades it causes overuse from recreationists. Like overuse in Strawberry Mtn. Wilderness, then it burned. It put it on the map for more people to visit. Same with wild & scenic rivers- overuse causes degration. (pg. 38 & 55)

III. Monument Landowner meeting Tuesday June 5, 2007

BLM held a public meeting in Monument on June 5, 2007, specifically inviting 26 private landowners along the North Fork from Camas Creek to Monument. Sixteen individuals attended this meeting; most were landowners who had the following concerns regarding Wild and Scenic River designation:

1. Does what the public say matter, or has someone within government already made a decision?

2. If this became a federal WSR would it change the state designation or jurisdiction?

3. I was on two different committees, one for the WSR designation [1988] there were a lot of tough battles. We had Kimberly to Wall Creek taken out of the WSR provision. Is this still the case? So it (WSR designation) may come up again?

4. I have a specific question. If a WSR decision is made will it be difficult to tear down our existing house and build something different?

BLM is aware that landowners would like to maintain their motorized access to their private lands and do not want public trespass on their private lands.

Appendix J: Grazing

This appendix is divided into two sets of tables. The first set (Table J-1) summarizes allotments by area, status of Rangeland Health Standard and Guidelines, and Grazing Matrix Outcomes by alternative. The second set (Table J-2) summarizes allotments by the values of specific Grazing Matrix factors and ratings by alternative (see Chapter 2, Livestock Grazing section for an explanation of factors and ratings).

Key (Table J-1)

AUMs = Animal Unit Months

S&Gs = Rangeland Health Standards and Guides

Standard 1 = Watershed Function - Uplands

Standard 2 = Watershed Function - Riparian/Wetland Areas

Standard 3 = Ecological Processes

Standard 4 = Water Quality

Standard 5 =Native, T&E, and Locally Important Species

Bolded allotment names are managed under the Oregon Land Exchange Act of 2000. Forage for these allotments (AUMs appearing in parentheses) is currently unavailable for livestock.

O = Allotment is available ("O") for livestock grazing

- = If permit is voluntarily relinquished (or allotment is already vacant), allotment would be unavailable ("Closed") for livestock grazing

R = If permit is voluntarily relinquished, it would be used as a Reserve Forage Allotment (RFA)

O/R = If permit is voluntarily relinquished, allotment would be available ("Open") for livestock grazing, or used as an RFA

-/R = If permit is voluntarily relinquished, allotment would be unavailable ("Closed") for livestock grazing, or used as an RFA

CLOSE = Allotment would be unavailable for livestock grazing, regardless of permit relinquishment

Table J-1. Allotments in the John Day Basin planning area by area, status of Rangeland Health Standard and Guidelines, and Grazing Matrix Outcomes by alternative.

Number	Name	Total Acres	BLM Acres	BLM AUMs	Year S&G Completed	S&Gs Met?	1 or More Failures Caused by Livestock?	Standards not met	Alt 1	Alts 2 and 5	Alt 3	Alt 4
2500	Frank Anderson	7,467	79	10					O	-/R	-/R	-/R
2501	Herbert Asher	3,585	2,522	101	2005	NO	NO	2	O	-/R	-/R	-
2503	Asher Hubert	580	317	17					O	O	O	-/R
2504	Barker	5,823	157	18	2003	YES			O	-/R	-/R	-/R
2505	Barnett	2,099	394	55	2003	YES			O	O	O	O
2506	Maxine Barnett	3,284	195	19	2004	NO	YES	1,2,3,4,5	O	-/R	-/R	-/R
2507	Brooks	7,059	121	3					O	-/R	-/R	-/R
2508	Bear Creek	3,717	723	45					O	O	O	O
2509	Belshe	2,688	1,596	62	2003	YES			O	O	O	R
2511	Haystack	1,895	151	11					O	-	-	CLOSE
2512	Big Muddy	77,040	15,708	615	2002	NO	NO	1,2,3,4,5	O	O	O	R
2513	Big Sky	7,124	592	26	2002	YES			O	-/R	-/R	-/R
2514	Black Rock	15,751	3,408	224	2003	NO		1,2,3,4,5	O	O	O	O
2515	Bantam	319	40	6					O	-/R	-/R	-/R
2516	Gable Creek	4,979	4,979	210	2003	NO	NO	2,3,4,5	O	O	O	O
2517	Borschowa	2,170	76	4					O	-/R	-/R	-/R
2518	Pine Creek	16,518	5,437	346					O	O	O	R
2520	Smith Point	2,712	2,422	93	2002	NO	NO	2,4,5	O	O	O	R
2521	Horseshoe Bend	2,326	850	43	2003	YES			O	O	O	R
2522	James Brown	4,624	2,649	68	2003	YES			O	R	R	R
2524	Buck Hollow	4,987	441	10					O	-/R	-/R	-/R
2525	Rock Creek	11,232	2,619	231	2004	YES			O	O	O	O
2526	Peter Campbell	15,786	771	60	2004	YES			O	O	O	O
2528	Sentinel Peak	1,477	568	44					O	O	O	-/R
2529	F.C. Cherry	19,498	161	88					O	O	O	O
2530	Cimmiyotti	6,844	669	118					O	O	O	O
2531	Circle Bar	18,501	18,224	637	2003	NO	NO	3,4,5	O	-/R	-/R	-

Number	Name	Total Acres	BLM Acres	BLM AUMs	Year S&G Completed	S&Gs Met?	1 or More Failures Caused by Livestock?	Standards not met	Alt 1	Alts 2 and 5	Alt 3	Alt 4
2532	T. Cole	24,828	454	19	2002	NO	NO	2,4,5	O	-/R	-/R	-/R
2533	Sutton Mountain	26,352	25,788	489	2003	NO	NO	2,4,5	O	-	-	-
2534	Richmond	5,823	239	10					O	-/R	-/R	-/R
2535	Hayfield	491	309	11	2002	NO	NO	2,4,5	O	-/R	-/R	-/R
2536	Spring Basin	29,247	5,659	146	2002	YES			O	O	O	R
2537	Dead Dog Canyon	4,263	4,013	243	2003	NO	NO	2,4,5	O	O	O	R
2538	Decker	4,656	2,875	206	2003	YES			O	R	R	R
2539	Biggs Junction	1,472	114	14					O	-/R	-/R	-/R
2540	Persimmon Woods	2,298	82	5	2002	YES			O	-/R	-/R	-
2541	Eakin	6,248	1,758	12					O	-/R	-/R	-/R
2543	Ellsworth	1,696	642	32					O	-/R	-/R	-/R
2544	Circle S Ranch	2164	664	16	2002	NO	NO	2,4,5	O	-/R	-/R	-/R
2545	Cherry Creek	57428	11645	438					O	O	O	O/R
2546	Freeway	2021	160	2					O	-/R	-/R	-/R
2547	Sixmile	4926	2356	245	2004	NO	YES	2	O	O	O	O
2548	Hogan Creek	2823	41	3					O	-/R	-/R	-/R
2549	Hardie	4576	1062	84					O	O	O	O
2551	Clinton O. Harris	26525	862	98					O	-/R	-/R	-
2553	Willow Spring	1648	1093	20	2003	YES			O	-/R	-/R	-/R
2554	Charles H. Hill	3782	1584	86					O	-	-	CLOSE
2555	Hoag	1180	369	10	2002	YES			O	-/R	-/R	-/R
2556	Murray Howard	8488	638	33	2004	NO	NO	4	O	-	-	CLOSE
2557	Hulden	4590	157	17					O	-/R	-/R	-/R
2558	Squaw Creek	12594	4747	301	2004	NO	YES		O	O/R	O/R	O/R
2559	Fopiano	15160	163	17					O	-/R	-/R	-/R
2560	Baseline	1101	535	27	2002	NO	NO	1,2,3,4,5	O	-/R	-/R	-/R
2561	Girds Creek	21243	1696	61	2003	NO	NO	2,4,5	O	-	-	CLOSE
2562	J Bar S	4533	707	34	2004	YES			O	-	-	CLOSE

Number	Name	Total Acres	BLM Acres	BLM AUMs	Year S&G Completed	S&Gs Met?	1 or More Failures Caused by Livestock?	Standards not met	Alt 1	Alts 2 and 5	Alt 3	Alt 4
2563	Horseshoe Creek	28,865	1,612	100					O	O	O	-/R
2564	Cactus Ridge	1,045	323	20	2004	NO	YES	1,3	O	-/R	-/R	-
2565	Leroy A. Britt	8,954	212	33					O	-/R	-/R	-/R
2566	Justesen	2,545	113	3					O	-/R	-/R	-/R
2567	Kaser Brothers	6,049	1,526	59					O	O	O	O
2568	Keegan	7,102	610	29					O	-/R	-/R	-/R
2569	Zack T. Keys	9,800	1,812	58	2004	NO	NO	4	O	O	O	O
2570	Zack T Keys	3,246	1,595	64	2004	NO	NO	4	O	O	O	R
2571	Horn Butte	17,819	4,521	836	2004	NO	YES	2,4,5	O	O/R	O/R	R
2572	Laffoon and Carlson	6,712	2,823	83	2003	YES			O	-	-	-
2573	L.B. Ranch	457	24	2					O	-/R	-/R	-/R
2574	Lear	2,994	200	13					O	-/R	-/R	-/R
2575	Andrew F. Leckie, Jr	2,187	33	1					O	-/R	-/R	-
2576	Left Hand Canyon	4,759	117	3	2004	YES			O	-/R	-/R	-/R
2577	Byrds Point	6,469	1,690	94	2002	NO	NO	2,4,5	O	O	O	O
2578	Logan	15,713	1,428	111					O	O	O	O
2579	Eugene Logan Jr.	1,582	831	42	2004	YES			O	-/R	-/R	-
2581	Elsie Martin	4,806	985	22					O	-/R	-/R	-/R
2583	Mulkey	1,354	199	15	2004	YES			O	-	-	CLOSE
2584	Catherine Maurer	45,880	14,213	789					O	O	O	O/R
2585	Seek Peak	1,681	317	11					O	-/R	-/R	-/R
2586	Tom McDonald	6,947	458	27	2005	YES			O	-/R	-/R	-/R
2587	Corral Canyon	9,023	2,361	78	2002	NO	NO	1,2,3,4,5	O	-/R	-/R	-
2588	Spud	1,319	619	40	2002	NO	NO	2,4,5	O	-/R	-/R	-/R
2589	McQuinn	392	40	1					O	-/R	-/R	-/R
2590	Carroll Rim	3,704	3,471	101	2003	NO	NO	3,5	O	-	-	-
2591	Miller	3,815	1,822	47	2003	YES			O	-/R	-/R	-/R

Number	Name	Total Acres	BLM Acres	BLM AUMs	Year S&G Completed	S&Gs Met?	1 or More Failures Caused by Livestock?	Standards not met	Alt 1	Alts 2 and 5	Alt 3	Alt 4
2592	Mary Misener	1,020	511	51	2003	NO	NO	1,3,5	O	-	-	CLOSE
2593	Verne A. Mobley	6,415	1,316	133					O	O	O	O
2594	Morehouse and Elliot	232	64	3	2002	YES			O	-	-	CLOSE
2595	Windy River	1,772	721	53	2002	NO	NO	1,3,4,5	O	-/R	-/R	-/R
2596	Howard Mortimore	8,495	40	6					O	-/R	-/R	-/R
2597	John T. Murtha	15,458	8,894	283					O	O	O	R
2598	Hay Creek	4,186	1,757	126	2002	YES			O	O	O	O/R
2599	Kenneth Myers	6,363	159	10					O	-/R	-/R	-/R
2600	J. Willis Nartz	2,371	473	48					O	O	O	O
2601	Victor B. Nash	2,347	152	14					O	-/R	-/R	-/R
2603	Lee H. Petty John	9,874	355	14					O	-/R	-/R	-/R
2604	Philippi	8,097	1,039	64	2004	NO	NO	1,3,4,5	O	O	O	O
2605	E. Glenn Potter	1,268	76	3					O	-/R	-/R	-/R
2606	William W. Potter	884	82	4					O	-/R	-/R	-/R
2607	Pryor Farms	5,280	787	50	2005	NO	YES	2,4,5	O	O	O	O
2608	Rattray	27,646	10,795	517	2004	YES			O	O	O	R
2609	Crown Rock	4,277	4,257	105	2003	NO	NO	2,3,4,5	O	-/R	-/R	-
2611	Van Rietmann	3,398	843	25					O	-/R	-/R	-/R
2612	Arthur N. Robinson	819	39	1					O	-/R	-/R	-/R
2613	Frank R. Robinson	2,851	794	2					O	-/R	-/R	-
2614	Clarno Homestead	2,255	2,181	63	2003	YES			O	O	O	R
2616	Orville Ruggles	2,680	8	11	2003	YES			O	-/R	-/R	-/R
2617	Emigrant Canyon	5,759	609	20	2002	NO	NO	1,3,4,5	O	-/R	-/R	-/R
2619	Sid Seale	40,052	14,705	733	2003	NO		2,4,5	O	O	O	R
2620	Evelyn E. See	2,041	176	3					O	-/R	-/R	-/R
2621	Earl A. Smith	16,032	221	35	2003	YES			O	-/R	-/R	-/R
2622	Alta M. Spalding	620	130	7					O	-/R	-/R	-/R

Number	Name	Total Acres	BLM Acres	BLM AUMs	Year S&G Completed	S&Gs Met?	1 or More Failures Caused by Livestock?	Standards not met	Alt 1	Alts 2 and 5	Alt 3	Alt 4
2623	Butte Creek	62,597	4,176	230	2003	YES			O	O	O	R
2624	Burnt Ranch	1,566	293	5	2002	NO	NO	1,2,3,4,5	O	-	-	CLOSE
2625	Davd M. Stirewalt	5,100	1,216	65					O	O	O	O
2626	Harper Mountain	10,808	718	25					O	-/R	-/R	-
2627	Robert W. Straub	5,322	1,585	69					O	-	-	CLOSE
2628	Fourmile Canyon	2,408	835	152	2004	NO	YES	1	O	-/R	-/R	-
2629	Tatum	6,080	2,860	113	2003	YES			O	O	O	R
2630	Tripp		71	7	2002	NO	NO	2,4,5	O	-/R	-/R	-/R
2631	Dipping Vat	2,123	1,151	25					O	-/R	-/R	-/R
2632	Larson	474	77	5					O	-/R	-/R	-/R
2633	Amine Peak	146,31	4,372	294	2002	NO	NO	2,4,5	O	-/R	-/R	-
2634	Corral Hollow	4,451	157	32					O	-/R	-/R	-/R
2635	Richard Foster	708	252	20					O	-	-	CLOSE
2636	Weedman Ranches	3,196	301	6					O	-/R	-/R	-/R
2637	V.O. West	3,389	232	15	2002	NO	NO	1,3,4,5	O	-	-	-
2639	Tubb Creek	6,510	407	50					O	O	O	O
2641	North Eighty	144	78	3	2004	YES			O	O	O	O
2642	Mascall-Cant	9,932	4,162	265	2004	NO	YES		O	-/R	-/R	-
2644	Hi-Meadows		544	98	2003	YES			O	-/R	-/R	-
2645	Clark	15,531	4,135	158					O	O	O	O
2646	Lonerock	87	68	27	2003	YES			O	O	O	O
2648	Hartung	1,884	697	22	2002	YES			O	-/R	-/R	-/R
2649	W Rim	2,023	349	3	2002	NO	NO	1,3	O	-/R	-/R	-/R
2651	Bull Canyon	1,879	278	3					O	-/R	-/R	-/R
2653	Brooks Lease	16,658	36	2					O	-/R	-/R	-/R
2655	Norton Ranch	25,499	316	21					O	-/R	-/R	-/R
2656	Dry Knob	1,087	334	7	2002	NO	NO	2,4,5	O	-/R	-/R	-/R
2657	Bridge Creek	553	52	2					O	-/R	-/R	-/R

Number	Name	Total Acres	BLM Acres	BLM AUMs	Year S&G Completed	S&Gs Met?	1 or More Failures Caused by Livestock?	Standards not met	Alt 1	Alts 2 and 5	Alt 3	Alt 4
2659	Packsaddle Mountain	1,100	397	20	2003	YES			O	-	-	CLOSE
2660	Rattlesnake Creek	4,218	283	11					O	-/R	-/R	-
2661	Pebble Springs	5,742	158	53					O	O	O	O
2662	Johnson Creek	21,031	7,115	436					O	O	O	R
2663	Smith Hollow	8,858	570	51					O	O	O	O
2664	Speckle Canyon	134	79	2	2004	YES			O	O	O	O
2665	Workman	2,667	40	3					O	-/R	-/R	-/R
2667	Gooseberry Mountain	3,475	1,266	43					O	O	O	O
2669	Kiosk	4,738	159	16	2004	NO	YES	1,3,5	O	-	-	CLOSE
2670	Rowe Creek	1379	360	16					O	-/R	-/R	-/R
2671	Red Rock	2728	964	40	2002	NO	NO	2,4,5	O	-	-	-
2672	Table Mountain	10,836	123	11					O	-/R	-/R	-/R
4001	Johnny Creek	6788	2,114	423	2005	NO	NO	2,3,5	O	-/R	-/R	-
4003	Slickear Mtn.	41,724	2,840	537					O	-/R	-/R	-
4007	Windy Point	5,878	2,585	407	2005	NO	NO	2,3,5	O	-/R	-/R	-
4009	Birch Creek	7,917	2,851	350	2005	NO	NO	2,3,5	O	-	-	-
4012	River	258	114	13					O	-/R	-/R	-/R
4013	John Day	91	40	5					O	-/R	-/R	-/R
4014	Middle Fork	81	81	16					O	-/R	-/R	-/R
4015	MUD SPRINGS	3,542	1,913	-128					-	CLOSE	CLOSE	CLOSE
4016	Dixie	6,599	2,215	236					O	O	O	O
4020	Murderer's Creek	37,181	16,917	860					O	-/R	-/R	-
4028	Neal Butte	3,565	684	119					O	-	-	CLOSE
4029	North Fork	5,666	2,279	316					O	-/R	-/R	-
4035	Rim	724	677	41					O	O	O	O
4036	Stonehill	2,895	511	80					O	O	O	O
4038	Dayville	3,945	1,667	141					O	-/R	-/R	-

Number	Name	Total Acres	BLM Acres	BLM AUMs	Year S&G Completed	S&Gs Met?	1 or More Failures Caused by Livestock?	Standards not met	Alt 1	Alts 2 and 5	Alt 3	Alt 4
4039	Aldrich Mtn.	9,995	40	5					O	-/R	-/R	-/R
4040	Merrell	15	5	9					O	-/R	-/R	-/R
4041	Franks Creek	3,703	2,109	196	2005	NO	YES	1,2,3,5	O	-	-	-
4042	Johnny Cake Mtn.	2,930	290	30					O	-	-	CLOSE
4043	Mahogany	10,514	319	64					O	O	O	-/R
4044	Soda Creek	6,317	1,968	405	2003	NO	YES	1,2,3,4,5	O	-	-	-
4049	Battle Creek	6,713	4,781	830	2004	YES			O	-/R	-/R	-
4050	Jinks Creek	5,750	80	16					O	-/R	-/R	-/R
4052	Big Baldy	15,139	12,036	1743	2004	YES			O	-/R	-/R	-
4056	Pointer	219	219	12					O	O	O	O
4058	Sugarloaf	214	160	45					O	O	O	O
4061	Scott Creek	4,420	913	119	2005	NO	NO	1,3,5	O	O	O	O
4064	Antelope	501	40	2					O	-/R	-/R	-/R
4065	East Franks Creek	1,625	630	81	2005	NO	NO	1,3,5	O	O	O	O
4066	Kidd Creek	6,211	720	91	2005	NO	NO	1,3,5	O	O	O	O
4067	Sheep CR Butte	17,598	810	153					O	O	O	-/R
4068	Sheep Gulch	5,804	3,561	250	2005	NO	NO	3,5	O	-/R	-/R	-
4072	Tamarack Creek	6,206	1,046	64					O	O	O	O
4074	McCarty Creek	1,471	1,158	20	2005	NO	YES	2	O	-	-	CLOSE
4075	Echo	80	40	5	2004	NO			O	-/R	-/R	-/R
4076	Cottonwood Creek	8,985	3,372	204	2004	NO	YES		O	-	-	-
4078	Gibson Hill	5,261	40	8					O	-/R	-/R	-
4080	South Stonehill	805	389	63					O	O	O	O
4082	Jack Of Clubs	1,574	83	8					O	-/R	-/R	-
4083	19 20	981	157	26					O	-	-	CLOSE
4086	Rudio Mtn.	4,999	3,788	590	2005	NO	NO	2,3,5	O	-/R	-/R	-/R
4087	Blue Basin	2,118	932	305	2005	NO	NO	2,4	O	-/R	-/R	-/R
4093	West Bologna Creek	4,453	79	12					O	-/R	-/R	-/R

Number	Name	Total Acres	BLM Acres	BLM AUMs	Year S&G Completed	S&Gs Met?	1 or More Failures Caused by Livestock?	Standards not met	Alt 1	Alts 2 and 5	Alt 3	Alt 4
4095	Fields Creek	4,051	1,011	214					O	O	O	O
4099	Indian	3,108	41	5					O	-/R	-/R	-/R
4103	Rockpile	9,830	4,925	928	2004	YES			O	-/R	-/R	-
4104	South Fork	4,841	240	47					O	O	O	-/R
4106	Izee	1,744	227	41					O	-	-	CLOSE
4107	Canyon Terrace	181	147	20					O	O	O	O
4108	Little Wall Creek	678	319	53					O	O	O	O
4109	Big Canyon Creek		146	20					O	-/R	-/R	-/R
4115	Canyon Mtn.	50	49	5					O	O	O	O
4119	Black Canyon	4,684	954	188	2004	YES			O	-/R	-/R	-
4120	Ferris Creek	5,364	3,374	277	2005	NO	NO	1,2,3,5	O	-	-	-
4122	Big Bend	712	266	25					O	-/R	-/R	-
4124	Smokey Creek	4,556	2,449	307	2002	YES			O	-/R	-/R	-
4125	UMATILLA	2,014	1,848	-123					-	-	-	-
4127	Kimberly	273	233	40					O	O	O	O
4131	Day Creek	2,511	1,586	160					O	-/R	-/R	-
4135	Gibson Creek	1,363	41	7					O	-/R	-/R	-
4139	BONE YARD	21,023	20,536	-1369					-	-/R	-/R	-
4145	Two County	29,203	14,010	1105	2005	NO	NO	4	O	-/R	-/R	-
4151	Kinzua	39,089	8,002	539	2005	NO	NO	2,3,5	O	O	O	O
4154	Morgan Creek	4,834	1,411	290					O	-/R	-/R	-
4155	Blackhorse Draw	4,276	476	29					O	-/R	-/R	-/R
4156	Rudio Creek	8,444	2,271	369	2005	YES			O	-/R	-/R	-
4159	Miller Mountain	1,683	41	5					O	-/R	-/R	-/R
4160	Bologna Creek	995	393	37					O	-/R	-/R	-/R
4163	Creek	1,105	757	51					O	-/R	-/R	-
4164	Corral Gulch	5,606	2,953	318					O	-	-	-
4184	Pass Creek	3,816	79	10					O	-/R	-/R	-

Number	Name	Total Acres	BLM Acres	BLM AUMs	Year S&G Completed	S&Gs Met?	1 or More Failures Caused by Livestock?	Standards not met	Alt 1	Alts 2 and 5	Alt 3	Alt 4
4186	Big Flats	12,581	924	100					O	-/R	-/R	-
4190	POTAMUS	4,341	4,304	-287					-	-	-/R	-
4191	Jack Rhodden	39,983	101	26					O	-/R	-/R	-/R
4192	WILLIAM HEALY	7,082	5,160	-344					-	-	-/R	-
4193	DOHERTY	4,310	4,272	-285					-	-	-/R	-
4195	JERICHO CREEK	7,400	63,03	-420					-	-	-/R	-
4196	Big Wall Creek	1,536	40	3					O	-/R	-/R	-/R
4197	SCAFFOLD CREEK	1,846	1,614	-108					-	-/R	O	-
4198	WALL CREEK	485	485	-32					-	CLOSE	-/R	CLOSE
4352	Cow Creek	1,648	149	10					O	-/R	-/R	-/R

Table J-2. Allotments in the John Day Basin planning area by the values of specific Grazing Matrix factors and ratings by alternative.

Allotment Number	ALTERNATIVE 2 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Social	SMA Eco	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2500	0	0	0	50	0	92	1	0	0	0	0	0	L	20	L	0	L
2501	36	36	100	1	100	16	0.25	112	0	75	0	68	M	75	M	37	M
2503	30	30	0	100	0	86	1	100	0	0	0	15	L	58	M	32	M
2504	0	0	0	50	0	85	1	0	0	0	0	0	L	20	L	0	L
2505	0	0	0	55	100	54	1	0	0	0	0	0	L	72	M	0	L
2506	0	0	0	70	0	84	1	0	0	0	100	0	L	19	L	25	L
2507	0	0	0	50	0	98	1	100	0	0	0	0	L	18	L	25	L
2508	0	0	0	10	0	63	1	14	0	0	0	0	L	90	M	3	L
2509	123	23	100	1	79	48	2	15	48	0	0	112	M	77	M	21	L
2511	100	100	0	100	0	91	2	72	0	0	0	50	M	13	L	43	M
2512	7	7	100	1	36	1	0.25	16	0	75	0	54	M	144	M	6	L
2513	41	41	43	20	0	78	1.5	23	0	0	0	42	M	19	L	16	L
2514	2	2	0	1	0	1	0.25	4	100	0	0	1	L	174	H	27	M
2515	0	0	0	70	0	95	1	100	0	0	0	0	L	17	L	25	L
2516	0	0	100	1	100	1	0.25	100	0	75	0	50	M	113	M	25	L
2517	0	0	0	50	0	97	1	100	0	0	0	0	L	18	L	25	M
2518	46	6	100	1	100	1	1	0	82	0	0	73	M	121	M	22	L
2520	50	50	100	1	83	23	1	42	0	75	0	75	M	85	M	23	L
2521	126	26	85	1	47	64	2	32	0	0	0	105	M	59	M	14	L
2522	138	38	100	1	66	43	2	40	0	0	0	119	H	83	M	19	L
2524	0	0	0	10	0	92	1	0	0	0	0	0	L	22	L	0	L
2525	0	0	0	1	0	1	0.25	100	0	0	0	0	L	179	H	25	L
2526	0	0	4	1	0	50	0.25	100	0	0	0	2	L	84	M	25	L
2528	0	0	36	50	0	63	1	100	100	0	0	18	L	57	M	50	M
2529	0	0	0	20	0	27	0.25	0	0	0	0	0	L	93	M	0	L

Allotment Number	ALTERNATIVE 2 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Social	SMA Eco	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2530	0	0	0	1	0	2	0.25	0	0	0	0	0	L	100	M	0	L
2531	125	66	100	1	100	1	2	100	0	75	0	112	M	83	M	42	M
2532	1	1	0	30	0	84	1	49	0	75	0	1	L	18	L	13	L
2533	161	77	100	1	100	1	2	100	0	75	0	131	H	75	M	44	M
2534	0	0	0	75	0	92	1	0	0	0	0	0	L	19	L	0	L
2535	108	37	31	70	100	91	2	0	0	75	0	70	M	39	L	9	L
2536	78	3	100	1	100	1	1	0	0	0	0	89	M	133	M	1	L
2537	10	10	100	1	100	1	0.25	72	0	75	0	55	M	116	M	21	L
2538	136	41	100	1	100	1	2	33	0	0	0	118	H	112	M	18	L
2539	0	0	0	60	0	88	1	0	0	0	0	0	L	20	L	0	L
2540	52	52	0	100	0	96	2	79	0	0	0	26	L	14	L	33	M
2541	100	0	100	30	75	90	1.5	1	38	0	0	100	M	12	L	10	L
2543	0	0	0	1	0	73	1	0	0	0	0	0	L	23	L	0	L
2544	17	17	20	80	38	87	1	100	0	75	0	19	L	12	L	29	M
2545	2	2	100	1	2	1	0.25	66	0	0	0	51	M	161	H	17	L
2546	0	0	0	50	100	98	1	0	0	0	0	0	L	17	L	0	L
2547	0	0	100	1	100	1	0.25	0	0	0	20	50	M	151	H	5	L
2548	0	0	0	90	0	98	1	0	0	0	0	0	L	18	L	0	L
2549	0	0	96	1	0	30	0.25	0	72	0	0	48	M	77	M	18	L
2551	39	39	4	95	100	18	0.25	100	0	0	0	21	L	52	L	35	M
2553	113	13	100	50	0	83	1.5	12	0	0	0	107	M	55	L	6	L
2554	0	0	100	1	100	28	0.25	100	100	0	0	50	M	51	L	50	M
2555	36	36	37	100	0	92	1	58	0	0	0	37	M	14	L	24	L
2556	61	61	44	20	0	73	1.5	72	0	75	0	53	M	15	L	33	M
2557	0	0	0	80	0	86	1	0	0	0	0	0	L	19	L	0	L
2558	0	0	100	1	0	1	0.25	42	0	0	80	50	M	167	H	31	M

Allotment Number	ALTERNATIVE 2 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Social	SMA Eco	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2559	0	0	0	50	0	86	1	0	87	0	0	0	L	18	L	22	L
2560	44	44	54	90	100	78	1.5	42	0	75	0	49	M	9	L	22	L
2561	82	42	100	1	100	49	1	98	89	75	0	91	M	32	L	57	M
2562	39	39	71	50	100	72	1	11	100	0	0	55	M	11	L	37	M
2563	0	0	0	1	0	17	0.25	41	95	0	0	0	L	83	M	34	M
2564	0	0	0	70	100	83	1	100	0	0	40	0	L	14	L	35	M
2565	0	0	0	100	100	73	1	81	0	0	0	0	L	13	L	20	L
2566	0	0	0	50	100	98	1	0	0	0	0	0	L	17	L	0	L
2567	0	0	100	40	0	51	1	51	0	0	0	50	M	70	M	13	L
2568	0	0	0	50	0	76	1	69	0	0	0	0	L	19	L	17	L
2569	11	11	64	20	0	52	1	89	0	75	0	37	M	64	M	25	L
2570	5	5	100	20	44	47	0.25	53	0	75	0	53	M	59	M	15	L
2571	96	96	0	1	0	1	1	84	0	0	60	48	M	160	H	60	M
2572	145	47	100	1	78	31	2	47	9	0	0	122	H	52	L	26	M
2573	0	0	0	85	0	98	1	0	0	0	0	0	L	18	L	0	L
2574	0	0	0	80	0	89	1	0	0	0	0	0	L	19	L	0	L
2575	0	0	3	60	100	99	1	100	100	0	0	2	L	11	L	50	M
2576	0	0	0	80	0	98	1	100	0	0	0	0	L	16	L	25	L
2577	10	10	20	1	0	22	0.25	100	0	75	0	15	L	75	M	27	M
2578	0	0	0	1	0	8	0.25	94	0	0	0	0	L	90	M	24	L
2579	100	100	83	1	0	65	1.5	100	0	0	0	91	M	92	M	50	M
2581	65	0	58	60	100	82	1.5	0	0	0	0	61	M	13	L	0	L
2583	100	100	20	20	0	88	1.5	100	0	0	0	60	M	16	L	50	M
2584	14	10	100	1	2	1	0.25	7	19	0	0	57	M	166	H	9	L
2585	0	0	0	60	0	91	1	100	0	0	0	0	L	17	L	25	L
2586	0	0	46	70	0	78	1	75	0	0	0	23	L	16	L	19	L

Allotment Number	ALTERNATIVE 2 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Social	SMA Eco	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2587	0	0	100	1	64	35	0.25	1	101	75	0	50	M	55	M	26	M
2588	24	24	62	20	0	67	1	0	0	75	0	43	M	18	L	6	L
2589	0	0	0	100	0	99	1	100	0	0	0	0	L	15	L	25	L
2590	187	93	100	1	100	16	2	100	0	75	0	143	H	66	M	48	M
2591	128	32	100	1	87	61	2	39	25	0	0	114	M	49	L	24	L
2592	200	100	51	30	100	58	2	100	0	75	0	125	H	41	L	50	M
2593	0	0	0	50	0	1	0.25	0	100	0	0	0	L	156	H	25	L
2594	100	100	6	1	100	98	2	95	0	0	0	53	M	14	L	49	M
2595	53	53	72	80	100	56	1.5	40	0	75	0	63	M	38	L	23	L
2596	0	0	0	80	0	95	1	0	0	0	0	0	L	19	L	0	L
2597	85	53	100	1	7	1	1	42	0	0	0	93	M	145	M	24	L
2598	18	18	100	1	63	1	0.25	17	0	0	0	59	M	152	H	9	L
2599	0	0	0	80	0	92	1	23	0	0	0	0	L	18	L	6	L
2600	0	0	0	30	0	60	1	0	0	0	0	0	L	88	M	0	L
2601	0	0	0	90	0	88	1	0	0	0	0	0	L	18	L	0	L
2603	0	0	0	30	0	88	1	0	0	0	0	0	L	21	L	0	L
2604	3	3	0	1	0	47	0.25	31	0	75	0	1	L	83	M	8	L
2605	0	0	0	70	0	98	1	68	0	0	0	0	L	17	L	17	L
2606	0	0	0	50	0	97	1	0	0	0	0	0	L	20	L	0	L
2607	0	0	0	1	0	58	1	0	23	0	60	0	L	91	M	21	L
2608	100	50	100	1	73	1	1	1	8	0	0	100	M	132	M	14	L
2609	29	0	100	1	100	13	0.25	100	20	75	0	65	M	99	M	30	M
2611	0	0	84	50	100	79	1	0	0	0	0	42	M	15	L	0	L
2612	0	0	0	50	0	99	1	0	0	0	0	0	L	20	L	0	L
2613	0	0	0	70	0	98	1	100	100	0	0	0	L	14	L	50	M
2614	22	22	100	1	100	48	0.25	0	45	0	0	61	M	126	M	17	L

Allotment Number	ALTERNATIVE 2 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Social	SMA Eco	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2616	0	0	0	70	0	91	1	0	0	0	0	0	L	19	L	0	L
2617	35	35	0	10	0	83	1	53	0	75	0	17	L	18	L	22	L
2619	128	43	100	1	43	1	2	35	0	75	0	114	M	109	M	20	L
2620	0	0	0	70	0	98	1	0	0	0	0	0	L	19	L	0	L
2621	0	0	0	20	0	71	1	100	0	0	0	0	L	20	L	25	L
2622	0	0	4	60	0	94	1	100	0	0	0	2	L	17	L	25	L
2623	38	36	100	1	96	1	0.25	0	0	0	0	69	M	143	M	9	L
2624	61	61	12	90	100	96	2	100	0	75	0	37	M	8	L	40	M
2625	0	0	0	10	0	46	0.25	100	0	0	0	0	L	83	M	25	L
2626	0	0	0	30	0	79	1	100	100	0	0	0	L	16	L	50	M
2627	7	7	92	50	100	43	0.25	95	100	0	0	49	M	40	L	50	M
2628	95	95	71	1	85	1	1	86	0	0	20	83	M	122	M	50	M
2629	39	15	100	1	53	6	0.25	13	64	0	0	70	M	67	M	23	L
2630	100	100	7	100	43	94	2	0	0	75	0	54	M	11	L	25	L
2631	79	0	100	1	92	79	1.5	0	100	0	0	90	M	47	L	25	L
2632	0	0	0	90	0	96	1	0	0	0	0	0	L	18	L	0	L
2633	21	21	100	1	100	1	0.25	93	0	75	0	61	M	110	M	29	M
2634	0	0	0	60	100	73	1	0	0	0	0	0	L	17	L	0	L
2635	100	100	0	98	0	83	1.5	100	0	0	0	50	M	13	L	50	M
2636	4	4	12	40	0	95	1	20	0	0	0	8	L	20	L	6	L
2637	80	80	12	90	67	88	1.5	25	0	75	0	46	M	11	L	26	M
2639	0	0	36	75	10	58	1	0	99	0	0	18	L	62	M	25	L
2641	0	0	8	100	0	98	1	100	0	0	0	4	L	59	M	25	L
2642	0	0	100	50	0	1	0.25	83	0	0	60	50	M	139	M	36	M
2644	100	100	0	1	0	18	1	100	0	0	0	50	M	76	M	50	M
2645	10	10	44	10	0	1	0.25	82	0	0	0	27	L	166	H	23	L

Allotment Number	ALTERNATIVE 2 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Social	SMA Eco	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2646	0	0	0	70	0	78	1	100	0	0	0	0	L	68	M	25	L
2648	44	44	70	30	100	82	1.5	30	0	0	0	57	M	14	L	18	L
2649	161	93	35	80	0	98	2	0	0	75	0	98	M	10	L	23	L
2651	39	0	0	100	0	98	1	0	0	0	0	19	L	16	L	0	L
2653	0	0	0	70	0	98	1	0	0	0	0	0	L	19	L	0	L
2655	0	0	0	70	0	83	1	20	0	0	0	0	L	19	L	5	L
2656	121	40	28	50	0	94	2	0	0	75	0	74	M	13	L	10	L
2657	0	0	0	50	0	98	1	100	0	0	0	0	L	18	L	25	L
2659	200	100	40	60	100	83	2	100	0	0	0	120	H	7	L	50	M
2660	0	0	16	99	0	91	1	196	0	0	0	8	L	12	L	49	M
2661	100	100	0	1	0	56	1.5	0	0	0	0	50	M	82	M	25	L
2662	9	9	100	80	0	1	0.25	22	24	0	0	54	M	131	M	14	L
2663	0	0	0	30	0	58	1	0	0	0	0	0	L	88	M	0	L
2664	0	0	0	90	0	98	1	100	0	0	0	0	L	62	M	25	L
2665	0	0	0	100	0	98	1	0	0	0	0	0	L	18	L	0	L
2667	0	0	100	10	0	64	1	28	0	0	0	50	M	77	M	7	L
2669	100	100	16	1	0	87	1.5	100	0	0	60	58	M	17	L	65	M
2670	0	0	0	50	0	87	1	0	0	0	0	0	L	20	L	0	L
2671	23	23	72	50	100	67	1	100	0	75	0	48	M	10	L	31	M
2672	0	0	0	80	0	91	1	0	49	0	0	0	L	17	L	12	L
4001	19	19	100	50	0	1	0.25	163	0	75	0	60	M	101	M	46	M
4003	22	22	100	85	9	1	0.25	135	0	0	0	61	M	107	M	39	M
4007	0	0	100	50	0	1	0.25	160	0	75	0	50	M	106	M	40	M
4009	31	31	100	50	0	1	0.25	193	99	75	0	65	M	68	M	81	H
4012	0	0	11	75	100	89	1	100	0	0	0	6	L	13	L	25	L
4013	0	0	0	100	0	96	1	100	0	0	0	0	L	15	L	25	L

Allotment Number	ALTERNATIVE 2 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Social	SMA Eco	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4014	0	0	8	95	100	87	1	100	0	0	0	4	L	49	L	25	L
4015	241	241	100	1	100	58	2	103	0	0	0	170	H	51	L	86	H
4016	0	0	100	1	100	1	0.25	11	0	0	0	50	M	149	M	3	L
4020	52	11	100	1	100	1	1	236	0	0	0	76	M	92	M	62	M
4028	85	85	20	55	42	1	1	186	0	0	0	52	M	53	L	68	M
4029	100	100	100	1	100	22	1	154	0	0	0	100	M	90	M	71	M
4035	0	0	68	1	0	66	1	100	0	0	0	34	L	150	M	25	L
4036	0	0	0	100	0	33	0.25	31	17	0	0	0	L	72	M	12	L
4038	0	0	100	1	0	1	0.25	188	0	0	0	50	M	138	M	47	M
4039	0	0	4	100	0	96	1	100	0	0	0	2	L	15	L	25	L
4040	0	0	0	50	0	93	1	100	0	0	0	0	L	18	L	25	L
4041	3	3	100	1	100	1	0.25	169	100	0	80	51	M	93	M	88	H
4042	74	74	29	50	100	75	1.5	100	0	0	0	51	M	12	L	43	M
4043	0	0	32	1	0	47	0.25	195	0	0	0	16	L	72	M	49	M
4044	0	0	100	50	0	1	0.25	200	0	0	100	50	M	116	M	75	H
4049	0	0	100	1	100	1	0.25	224	0	0	0	50	M	107	M	56	M
4050	0	0	0	100	0	87	1	100	0	0	0	0	L	15	L	25	L
4052	31	31	100	1	100	1	0.25	197	0	0	0	65	M	105	M	57	M
4056	0	0	22	50	0	90	1	91	0	0	0	11	L	69	M	23	L
4058	0	0	0	1	0	63	1	0	0	0	0	0	L	140	M	0	L
4061	0	0	0	70	0	1	0.25	89	0	75	0	0	L	68	M	22	L
4064	0	0	4	100	100	98	1	0	0	0	0	2	L	14	L	0	L
4065	0	0	63	1	0	33	0.25	100	0	75	0	32	L	70	M	25	L
4066	0	0	36	45	0	24	0.25	51	0	75	0	18	L	70	M	13	L
4067	39	39	12	98	0	1	0.25	164	0	0	0	25	L	116	M	51	M
4068	1	1	100	10	0	1	0.25	174	0	75	0	50	M	119	M	44	M

Allotment Number	ALTERNATIVE 2 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Social	SMA Eco	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4072	0	0	0	40	0	47	0.25	0	0	0	0	0	L	87	M	0	L
4074	85	85	100	50	100	83	1.5	129	0	0	20	93	M	35	L	58	M
4075	0	0	4	1	0	96	1	14	0		0	2	L	22	L	4	L
4076	8	8	100	1	0	1	0.25	230	68	0	100	54	M	111	M	102	H
4078	0	0	0	100	0	93	1	200	0	0	0	0	L	13	L	50	M
4080	0	0	39	95	0	48	0.25	100	0	0	0	20	L	62	M	25	L
4082	0	0	8	100	0	93	1	125	78	0	0	4	L	12	L	51	M
4083	70	70	12	70	100	78	1.5	100	0	0	0	41	M	12	L	42	M
4086	0	0	100	1	100	1	0.25	111	0	75	0	50	M	111	M	28	M
4087	0	0	93	50	100	1	0.25	113	0	75	0	47	M	93	M	28	M
4093	0	0	0	100	100	90	1	0	94	0	0	0	L	12	L	24	L
4095	0	0	100	1	0	1	0.25	63	0	0	0	50	M	163	H	16	L
4099	13	0	4	100	0	96	1	94	0	0	0	9	L	15	L	24	L
4103	55	55	100	1	0	1	1	225	0	0	0	77	M	117	M	70	M
4104	33	33	24	100	0	61	1	100	0	0	0	29	L	57	M	33	M
4106	96	96	0	100	0	66	1.5	200	0	0	0	48	M	42	L	74	M
4107	0	0	0	60	0	83	1	98	0	0	0	0	L	70	M	25	L
4108	0	0	32	50	100	56	1	0	0	0	0	16	L	69	M	0	L
4109	0	0	14	90	0	83	1	100	0	0	0	7	L	15	L	25	L
4115	0	0	5	90	0	96	1	72	0	0	0	3	L	65	M	18	L
4119	4	4	89	50	0	1	0.25	205	0	0	0	46	M	117	M	52	M
4120	17	17	100	1	100	1	0.25	185	100	75	0	58	M	69	M	75	H
4122	37	37	0	40	0	79	1	200	0	0	0	18	L	15	L	59	M
4124	93	0	100	1	0	1	1	211	0	0	0	97	M	111	M	53	M
4125	203	203	100	1	100	63	2	100	0	0	0	151	H	73	M	76	H
4127	0	0	23	52	0	67	1	100	0	0	0	12	L	70	M	25	L

Allotment Number	ALTERNATIVE 2 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Social	SMA Eco	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4131	0	0	100	1	26	1	0.25	174	0	0	0	50	M	134	M	44	M
4135	0	0	4	50	0	94	1	200	0	0	0	2	L	15	L	50	M
4139	93	93	100	1	100	1	1	126	0		0	97	M	103	M	56	M
4145	16	16	100	1	7	1	0.25	134	52	75	0	58	M	113	M	50	M
4151	0	0	100	1	0	1	0.25	30	0	75	0	50	M	151	H	8	L
4154	0	0	100	1	0	1	0.25	200	0	0	0	50	M	135	M	50	M
4155	13	13	0	1	0	76	1	100	0	0	0	6	L	20	L	28	M
4156	25	25	100	50	0	1	0.25	143	0	0	0	62	M	121	M	42	M
4159	0	0	0	100	0	96	1	0	0	0	0	0	L	18	L	0	L
4160	0	0	39	10	0	69	1	100	0	0	0	20	L	19	L	25	L
4163	0	0	76	1	100	58	1	265	0	0	0	38	M	70	M	66	M
4164	9	9	100	1	100	1	0.25	300	100	0	0	54	M	65	M	102	H
4184	0	0	0	100	0	92	1	200	0	0	0	0	L	13	L	50	M
4186	47	47	92	1	0	17	1	200	0	0	0	70	M	61	M	62	M
4190	90	90	100	1	100	1	1	200	0	0	0	95	M	80	M	83	H
4191	1	0	0	100	0	78	1	60	0	0	0	0	L	17	L	15	L
4192	159	159	100	20	100	1	2	125	0	0	0	130	H	81	M	71	M
4193	202	202	100	1	100	1	2	100	0	0	0	151	H	83	M	76	H
4195	189	189	100	1	100	1	2	70	0	0	0	144	H	92	M	65	M
4196	0	0	0	1	0	98	1	0	0	0	0	0	L	23	L	0	L
4197	100	100	100	1	100	23	1	1	0	0	0	100	M	127	M	25	M
4198	101	101	48	1	100	80	1.5	200	0	0	0	75	M	40	L	82	H
4352	0	0	15	99	0	92	1	100	0	0	0	8	L	15	L	25	L

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2500	0	0	0	50	0	92	1	0	0	0	0	0	L	20	L	0	L
2501	36	36	100	1	100	16	0.25	112	0	75	0	68	M	75	M	37	M
2503	30	30	0	100	0	86	1	100	0	0	0	15	L	58	M	32	M
2504	0	0	0	50	0	85	1	0	0	0	0	0	L	20	L	0	L
2505	0	0	0	55	100	54	1	0	0	0	0	0	L	72	M	0	L
2506	0	0	0	70	0	84	1	0	0	0	100	0	L	19	L	25	L
2507	0	0	0	50	0	98	1	100	0	0	0	0	L	18	L	25	L
2508	0	0	0	10	0	63	1	14	0	0	0	0	L	90	M	3	L
2509	123	23	100	1	79	48	2	15	48	0	0	112	M	77	M	21	L
2511	100	100	0	100	0	91	2	72	0	0	0	50	M	13	L	43	M
2512	7	7	100	1	36	1	0.25	16	0	75	0	54	M	144	M	6	L
2513	41	41	43	20	0	78	1.5	23	0	0	0	42	M	19	L	16	L
2514	2	2	0	1	0	1	0.25	4	100	0	0	1	L	174	H	27	M
2515	0	0	0	70	0	95	1	100	0	0	0	0	L	17	L	25	L
2516	0	0	100	1	100	1	0.25	100	0	75	0	50	M	113	M	25	L
2517	0	0	0	50	0	97	1	100	0	0	0	0	L	18	L	25	M
2518	46	6	100	1	100	1	1	0	82	0	0	73	M	121	M	22	L
2520	50	50	100	1	83	23	1	42	0	75	0	75	M	85	M	23	L
2521	126	26	85	1	47	64	2	32	0	0	0	105	M	59	M	14	L
2522	138	38	100	1	66	43	2	40	0	0	0	119	H	83	M	19	L
2524	0	0	0	10	0	92	1	0	0	0	0	0	L	22	L	0	L
2525	0	0	0	1	0	1	0.25	100	0	0	0	0	L	179	H	25	L
2526	0	0	4	1	0	50	0.25	100	0	0	0	2	L	84	M	25	L
2528	0	0	36	50	0	63	1	100	100	0	0	18	L	57	M	50	M
2529	0	0	0	20	0	27	0.25	0	0	0	0	0	L	93	M	0	L

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2530	0	0	0	1	0	2	0.25	0	0	0	0	0	L	100	M	0	L
2531	125	66	100	1	100	1	2	100	0	75	0	112	H	83	M	42	M
2532	1	1	0	30	0	84	1	49	0	75	0	1	L	18	L	13	L
2533	161	77	100	1	100	1	2	100	0	75	0	131	H	75	M	44	M
2534	0	0	0	75	0	92	1	0	0	0	0	0	L	19	L	0	L
2535	108	37	31	70	100	91	2	0	0	75	0	70	M	39	L	9	L
2536	78	3	100	1	100	1	1	0	0	0	0	89	M	133	M	1	L
2537	10	10	100	1	100	1	0.25	72	0	75	0	55	M	116	M	21	L
2538	136	41	100	1	100	1	2	33	0	0	0	118	H	112	M	18	L
2539	0	0	0	60	0	88	1	0	0	0	0	0	L	20	L	0	L
2540	52	52	0	100	0	96	2	79	0	0	0	26	L	14	L	33	M
2541	100	0	100	30	75	90	1.5	1	38	0	0	100	M	12	L	10	L
2543	0	0	0	1	0	73	1	0	0	0	0	0	L	23	L	0	L
2544	17	17	20	80	38	87	1	100	0	75	0	19	L	12	L	29	M
2545	2	2	100	1	2	1	0.25	66	0	0	0	51	M	161	H	17	L
2546	0	0	0	50	100	98	1	0	0	0	0	0	L	17	L	0	L
2547	0	0	100	1	100	1	0.25	0	0	0	20	50	M	151	H	5	L
2548	0	0	0	90	0	98	1	0	0	0	0	0	L	18	L	0	L
2549	0	0	96	1	0	30	0.25	0	72	0	0	48	M	77	M	18	L
2551	39	39	4	95	100	18	0.25	100	0	0	0	21	L	52	L	35	M
2553	113	13	100	50	0	83	1.5	12	0	0	0	107	M	55	L	6	L
2554	0	0	100	1	100	28	0.25	100	100	0	0	50	M	51	L	50	M
2555	36	36	37	100	0	92	1	58	0	0	0	37	M	14	L	24	L
2556	61	61	44	20	0	73	1.5	72	0	75	0	53	M	15	L	33	M
2557	0	0	0	80	0	86	1	0	0	0	0	0	L	19	L	0	L

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2558	0	0	100	1	0	1	0.25	42	0	0	80	50	M	167	H	31	M
2559	0	0	0	50	0	86	1	0	87	0	0	0	L	18	L	22	L
2560	44	44	54	90	100	78	1.5	42	0	75	0	49	M	9	L	22	L
2561	82	42	100	1	100	49	1	98	89	75	0	91	M	32	L	57	M
2562	39	39	71	50	100	72	1	11	100	0	0	55	M	11	L	37	M
2563	0	0	0	1	0	17	0.25	41	95	0	0	0	L	83	M	34	M
2564	0	0	0	70	100	83	1	100	0	0	40	0	L	14	L	35	M
2565	0	0	0	100	100	73	1	81	0	0	0	0	L	13	L	20	L
2566	0	0	0	50	100	98	1	0	0	0	0	0	L	17	L	0	L
2567	0	0	100	40	0	51	1	51	0	0	0	50	M	70	M	13	L
2568	0	0	0	50	0	76	1	69	0	0	0	0	L	19	L	17	L
2569	11	11	64	20	0	52	1	89	0	75	0	37	M	64	M	25	L
2570	5	5	100	20	44	47	0.25	53	0	75	0	53	M	59	M	15	L
2571	96	96	0	1	0	1	1	84	0	0	60	48	M	160	H	60	M
2572	145	47	100	1	78	31	2	47	9	0	0	122	H	52	L	26	M
2573	0	0	0	85	0	98	1	0	0	0	0	0	L	18	L	0	L
2574	0	0	0	80	0	89	1	0	0	0	0	0	L	19	L	0	L
2575	0	0	3	60	100	99	1	100	100	0	0	2	L	11	L	50	M
2576	0	0	0	80	0	98	1	100	0	0	0	0	L	16	L	25	L
2577	10	10	20	1	0	22	0.25	100	0	75	0	15	L	75	M	27	M
2578	0	0	0	1	0	8	0.25	94	0	0	0	0	L	90	M	24	L
2579	100	100	83	1	0	65	1.5	100	0	0	0	91	M	92	M	50	M
2581	65	0	58	60	100	82	1.5	0	0	0	0	61	M	13	L	0	L
2583	100	100	20	20	0	88	1.5	100	0	0	0	60	M	16	L	50	M
2584	14	10	100	1	2	1	0.25	7	19	0	0	57	M	166	H	9	L

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2585	0	0	0	60	0	91	1	100	0	0	0	0	L	17	L	25	L
2586	0	0	46	70	0	78	1	75	0	0	0	23	L	16	L	19	L
2587	0	0	100	1	64	35	0.25	1	101	75	0	50	M	55	M	26	M
2588	24	24	62	20	0	67	1	0	0	75	0	43	M	18	L	6	L
2589	0	0	0	100	0	99	1	100	0	0	0	0	L	15	L	25	L
2590	187	93	100	1	100	16	2	100	0	75	0	143	H	66	M	48	M
2591	128	32	100	1	87	61	2	39	25	0	0	114	H	49	L	24	L
2592	200	100	51	30	100	58	2	100	0	75	0	125	H	41	L	50	M
2593	0	0	0	50	0	1	0.25	0	100	0	0	0	L	156	H	25	L
2594	100	100	6	1	100	98	2	95	0	0	0	53	M	14	L	49	M
2595	53	53	72	80	100	56	1.5	40	0	75	0	63	M	38	L	23	L
2596	0	0	0	80	0	95	1	0	0	0	0	0	L	19	L	0	L
2597	85	53	100	1	7	1	1	42	0	0	0	93	M	145	M	24	L
2598	18	18	100	1	63	1	0.25	17	0	0	0	59	M	152	H	9	L
2599	0	0	0	80	0	92	1	23	0	0	0	0	L	18	L	6	L
2600	0	0	0	30	0	60	1	0	0	0	0	0	L	88	M	0	L
2601	0	0	0	90	0	88	1	0	0	0	0	0	L	18	L	0	L
2603	0	0	0	30	0	88	1	0	0	0	0	0	L	21	L	0	L
2604	3	3	0	1	0	47	0.25	31	0	75	0	1	L	83	M	8	L
2605	0	0	0	70	0	98	1	68	0	0	0	0	L	17	L	17	L
2606	0	0	0	50	0	97	1	0	0	0	0	0	L	20	L	0	L
2607	0	0	0	1	0	58	1	0	23	0	60	0	L	91	M	21	L
2608	100	50	100	1	73	1	1	1	8	0	0	100	M	132	M	14	L
2609	29	0	100	1	100	13	0.25	100	20	75	0	65	M	99	M	30	M
2611	0	0	84	50	100	79	1	0	0	0	0	42	M	15	L	0	L
2612	0	0	0	50	0	99	1	0	0	0	0	0	L	20	L	0	L

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2613	0	0	0	70	0	98	1	100	100	0	0	0	L	14	L	50	M
2614	22	22	100	1	100	48	0.25	0	45	0	0	61	M	126	M	17	L
2616	0	0	0	70	0	91	1	0	0	0	0	0	L	19	L	0	L
2617	35	35	0	10	0	83	1	53	0	75	0	17	L	18	L	22	L
2619	128	43	100	1	43	1	2	35	0	75	0	114	H	109	M	20	L
2620	0	0	0	70	0	98	1	0	0	0	0	0	L	19	L	0	L
2621	0	0	0	20	0	71	1	100	0	0	0	0	L	20	L	25	L
2622	0	0	4	60	0	94	1	100	0	0	0	2	L	17	L	25	L
2623	38	36	100	1	96	1	0.25	0	0	0	0	69	M	143	M	9	L
2624	61	61	12	90	100	96	2	100	0	75	0	37	M	8	L	40	M
2625	0	0	0	10	0	46	0.25	100	0	0	0	0	L	83	M	25	L
2626	0	0	0	30	0	79	1	100	100	0	0	0	L	16	L	50	M
2627	7	7	92	50	100	43	0.25	95	100	0	0	49	M	40	L	50	M
2628	95	95	71	1	85	1	1	86	0	0	20	83	M	122	M	50	M
2629	39	15	100	1	53	6	0.25	13	64	0	0	70	M	67	M	23	L
2630	100	100	7	100	43	94	2	0	0	75	0	54	M	11	L	25	L
2631	79	0	100	1	92	79	1.5	0	100	0	0	90	M	47	L	25	L
2632	0	0	0	90	0	96	1	0	0	0	0	0	L	18	L	0	L
2633	21	21	100	1	100	1	0.25	93	0	75	0	61	M	110	M	29	M
2634	0	0	0	60	100	73	1	0	0	0	0	0	L	17	L	0	L
2635	100	100	0	98	0	83	1.5	100	0	0	0	50	M	13	L	50	M
2636	4	4	12	40	0	95	1	20	0	0	0	8	L	20	L	6	L
2637	80	80	12	90	67	88	1.5	25	0	75	0	46	M	11	L	26	M
2639	0	0	36	75	10	58	1	0	99	0	0	18	L	62	M	25	L
2641	0	0	8	100	0	98	1	100	0	0	0	4	L	59	M	25	L

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2642	0	0	100	50	0	1	0.25	83	0	0	60	50	M	139	M	36	M
2644	100	100	0	1	0	18	1	100	0	0	0	50	M	76	M	50	M
2645	10	10	44	10	0	1	0.25	82	0	0	0	27	L	166	H	23	L
2646	0	0	0	70	0	78	1	100	0	0	0	0	L	68	M	25	L
2648	44	44	70	30	100	82	1.5	30	0	0	0	57	M	14	L	18	L
2649	161	93	35	80	0	98	2	0	0	75	0	98	M	10	L	23	L
2651	39	0	0	100	0	98	1	0	0	0	0	19	L	16	L	0	L
2653	0	0	0	70	0	98	1	0	0	0	0	0	L	19	L	0	L
2655	0	0	0	70	0	83	1	20	0	0	0	0	L	19	L	5	L
2656	121	40	28	50	0	94	2	0	0	75	0	74	M	13	L	10	L
2657	0	0	0	50	0	98	1	100	0	0	0	0	L	18	L	25	L
2659	200	100	40	60	100	83	2	100	0	0	0	120	H	7	L	50	M
2660	0	0	16	99	0	91	1	196	0	0	0	8	L	12	L	49	M
2661	100	100	0	1	0	56	1.5	0	0	0	0	50	M	82	M	25	L
2662	9	9	100	80	0	1	0.25	22	24	0	0	54	M	131	M	14	L
2663	0	0	0	30	0	58	1	0	0	0	0	0	L	88	M	0	L
2664	0	0	0	90	0	98	1	100	0	0	0	0	L	62	M	25	L
2665	0	0	0	100	0	98	1	0	0	0	0	0	L	18	L	0	L
2667	0	0	100	10	0	64	1	28	0	0	0	50	M	77	M	7	L
2669	100	100	16	1	0	87	1.5	100	0	0	60	58	M	17	L	65	H
2670	0	0	0	50	0	87	1	0	0	0	0	0	L	20	L	0	L
2671	23	23	72	50	100	67	1	100	0	75	0	48	M	10	L	31	M
2672	0	0	0	80	0	91	1	0	49	0	0	0	L	17	L	12	L
4001	19	19	100	50	0	1	0.25	163	0	75	0	60	M	101	M	46	M
4003	22	22	100	85	9	1	0.25	135	0	0	0	61	M	107	M	39	M

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4007	0	0	100	50	0	1	0.25	160	0	75	0	50	M	106	M	40	M
4009	31	31	100	50	0	1	0.25	193	99	75	0	65	M	68	M	81	H
4012	0	0	11	75	100	89	1	100	0	0	0	6	L	13	L	25	L
4013	0	0	0	100	0	96	1	100	0	0	0	0	L	15	L	25	L
4014	0	0	8	95	100	87	1	100	0	0	0	4	L	49	L	25	L
4015	149	149	100	1	100	27	2	103	0	0	0	125	H	46	L	63	H
4016	0	0	100	1	100	1	0.25	11	0	0	0	50	M	149	M	3	L
4020	52	11	100	1	100	1	1	236	0	0	0	76	M	92	M	62	M
4028	85	85	20	55	42	1	1	186	0	0	0	52	M	53	L	68	H
4029	69	69	100	1	100	1	1	154	28	0	0	85	M	86	M	56	M
4035	0	0	68	1	0	66	1	100	0	0	0	34	M	150	M	25	L
4036	0	0	0	100	0	33	0.25	31	17	0	0	0	L	72	M	12	L
4038	0	0	100	1	0	1	0.25	188	0	0	0	50	M	138	M	47	M
4039	0	0	4	100	0	96	1	100	0	0	0	2	L	15	L	25	L
4040	0	0	0	50	0	93	1	100	0	0	0	0	L	18	L	25	L
4041	3	3	100	1	100	1	0.25	169	100	0	80	51	M	93	M	88	H
4042	53	53	29	50	100	75	1.5	100	0	0	0	41	M	12	L	38	M
4043	0	0	32	1	0	47	0.25	195	0	0	0	16	L	72	M	49	M
4044	0	0	100	50	0	1	0.25	200	0	0	100	50	M	116	M	75	H
4049	0	0	100	1	100	1	0.25	224	0	0	0	50	M	107	M	56	M
4050	0	0	0	100	0	87	1	100	0	0	0	0	L	15	L	25	L
4052	31	31	100	1	100	1	0.25	197	0	0	0	65	M	105	M	57	M
4056	0	0	22	50	0	90	1	91	0	0	0	11	L	69	M	23	L
4058	0	0	0	1	0	63	1	0	0	0	0	0	L	140	M	0	L
4061	0	0	0	70	0	1	0.25	89	0	75	0	0	L	68	M	22	L

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4064	0	0	4	100	100	98	1	0	0	0	0	2	L	14	L	0	L
4065	0	0	63	1	0	33	0.25	100	0	75	0	32	L	70	M	25	L
4066	0	0	36	45	0	24	0.25	51	0	75	0	18	L	70	M	13	L
4067	39	39	12	98	0	1	0.25	164	0	0	0	25	L	116	M	51	M
4068	1	1	100	10	0	1	0.25	174	0	75	0	50	M	119	M	44	M
4072	0	0	0	40	0	47	0.25	0	0	0	0	0	L	87	M	0	L
4074	85	85	100	50	100	83	1.5	129	0	0	20	93	M	35	L	58	M
4075	0	0	4	1	0	96	1	14	0		0	2	L	22	L	4	L
4076	8	8	100	1	0	1	0.25	230	68	0	100	54	M	111	M	102	H
4078	0	0	0	100	0	93	1	200	0	0	0	0	L	13	L	50	M
4080	0	0	39	95	0	48	0.25	100	0	0	0	20	L	62	M	25	L
4082	0	0	8	100	0	93	1	125	78	0	0	4	L	12	L	51	M
4083	70	70	12	70	100	78	1.5	100	0	0	0	41	M	12	L	42	M
4086	0	0	100	1	100	1	0.25	111	0	75	0	50	M	111	M	28	M
4087	0	0	93	50	100	1	0.25	113	0	75	0	47	M	93	M	28	M
4093	0	0	0	100	100	90	1	0	94	0	0	0	L	12	L	24	L
4095	0	0	100	1	0	1	0.25	63	0	0	0	50	M	163	H	16	L
4099	13	0	4	100	0	96	1	94	0	0	0	9	L	15	L	24	L
4103	55	55	100	1	0	1	1	225	0	0	0	77	M	117	M	70	H
4104	33	33	24	100	0	61	1	100	0	0	0	29	L	57	M	33	M
4106	96	96	0	100	0	66	1.5	200	0	0	0	48	M	42	L	74	H
4107	0	0	0	60	0	83	1	98	0	0	0	0	L	70	M	25	L
4108	0	0	32	50	100	56	1	0	0	0	0	16	L	69	M	0	L
4109	0	0	14	90	0	83	1	100	0	0	0	7	L	15	L	25	L
4115	0	0	5	90	0	96	1	72	0	0	0	3	L	65	M	18	L

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4119	4	4	89	50	0	1	0.25	205	0	0	0	46	M	117	M	52	M
4120	17	17	100	1	100	1	0.25	185	100	75	0	58	M	69	M	75	H
4122	37	37	0	40	0	79	1	200	0	0	0	18	L	15	L	59	M
4124	93	0	100	1	0	1	1	211	0	0	0	97	M	111	M	53	M
4125	127	127	100	1	100	48	2	100	0	0	0	114	H	70	M	57	M
4127	0	0	23	52	0	67	1	100	0	0	0	12	L	70	M	25	L
4131	0	0	100	1	26	1	0.25	174	0	0	0	50	M	134	M	44	M
4135	0	0	4	50	0	94	1	200	0	0	0	2	L	15	L	50	M
4139	1	1	100	1	100	1	0.25	126	4		0	50	M	103	M	32	M
4145	16	16	100	1	7	1	0.25	134	52	75	0	58	M	113	M	50	M
4151	0	0	100	1	0	1	0.25	30	0	75	0	50	M	151	H	8	L
4154	0	0	100	1	0	1	0.25	200	0	0	0	50	M	135	M	50	M
4155	13	13	0	1	0	76	1	100	0	0	0	6	L	20	L	28	M
4156	25	25	100	50	0	1	0.25	143	0	0	0	62	M	121	M	42	M
4159	0	0	0	100	0	96	1	0	0	0	0	0	L	18	L	0	L
4160	0	0	39	10	0	69	1	100	0	0	0	20	L	19	L	25	L
4163	0	0	76	1	100	58	1	265	0	0	0	38	M	70	M	66	H
4164	9	9	100	1	100	1	0.25	300	100	0	0	54	M	65	M	102	H
4184	0	0	0	100	0	92	1	200	0	0	0	0	L	13	L	50	M
4186	47	47	92	1	0	17	1	200	0	0	0	70	M	61	M	62	M
4190	2	2	100	1	100	1	0.25	200	42	0	0	51	M	80	M	50	M
4191	1	0	0	100	0	78	1	60	0	0	0	0	L	17	L	15	L
4192	79	79	100	20	100	1	1	125	0	0	0	89	M	81	M	51	M
4193	124	124	100	1	100	1	2	100	0	0	0	112	M	83	M	56	M
4195	102	102	100	1	100	1	1	70	0	0	0	101	M	92	M	43	M

Allotment Number	ALTERNATIVE 3 Indicators (factors)											Estimated Levels Total Score in Category, and rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4196	0	0	0	1	0	98	1	0	0	0	0	0	L	23	L	0	L
4197	0	0	100	1	100	1	0.25	1	0	0	0	50	M	123	M	0	L
4198	1	1	48	1	100	73	1	200	25	0	0	25	L	39	L	50	M
4352	0	0	15	99	0	92	1	100	0	0	0	8	L	15	L	25	L

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2500	0	0	0	50	0	92	1	0	0	0	0	0	L	20	L	0	L
2501	36	36	100	1	100	16	0.25	112	0	75	0	68	H	75	M	37	H
2503	30	30	0	100	0	86	1	100	0	0	0	15	L	58	M	32	H
2504	0	0	0	50	0	85	1	0	0	0	0	0	L	20	L	0	L
2505	0	0	0	55	100	54	1	0	0	0	0	0	L	72	M	0	L
2506	0	0	0	70	0	84	1	0	0	0	100	0	L	19	L	25	L
2507	0	0	0	50	0	98	1	100	0	0	0	0	L	18	L	25	L
2508	0	0	0	10	0	63	1	14	0	0	0	0	L	90	M	3	L
2509	123	23	100	1	79	48	2	15	48	0	0	112	H	77	M	21	L
2511	100	100	0	100	0	91	2	72	0	0	0	50	M	13	L	43	H
2512	7	7	100	1	36	1	0.25	16	0	75	0	54	H	144	M	6	L
2513	41	41	43	20	0	78	1.5	23	0	0	0	42	M	19	L	16	L
2514	2	2	0	1	0	1	0.25	4	100	0	0	1	L	174	H	27	M
2515	0	0	0	70	0	95	1	100	0	0	0	0	L	17	L	25	L
2516	0	0	100	1	100	1	0.25	100	0	75	0	50	M	113	M	25	L
2517	0	0	0	50	0	97	1	100	0	0	0	0	L	18	L	25	M
2518	46	6	100	1	100	1	1	0	82	0	0	73	H	121	M	22	L
2520	50	50	100	1	83	23	1	42	0	75	0	75	H	85	M	23	L
2521	126	26	85	1	47	64	2	32	0	0	0	105	H	59	M	14	L
2522	138	38	100	1	66	43	2	40	0	0	0	119	H	83	M	19	L
2524	0	0	0	10	0	92	1	0	0	0	0	0	L	22	L	0	L
2525	0	0	0	1	0	1	0.25	100	0	0	0	0	L	179	H	25	L
2526	0	0	4	1	0	50	0.25	100	0	0	0	2	L	84	M	25	L
2528	0	0	36	50	0	63	1	100	100	0	0	18	L	57	M	50	H
2529	0	0	0	20	0	27	0.25	0	0	0	0	0	L	93	M	0	L

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2530	0	0	0	1	0	2	0.25	0	0	0	0	0	L	100	M	0	L
2531	125	66	100	1	100	1	2	100	0	75	0	112	H	83	M	42	H
2532	1	1	0	30	0	84	1	49	0	75	0	1	L	18	L	13	L
2533	161	77	100	1	100	1	2	100	0	75	0	131	H	75	M	44	H
2534	0	0	0	75	0	92	1	0	0	0	0	0	L	19	L	0	L
2535	108	37	31	70	100	91	2	0	0	75	0	70	H	39	L	9	L
2536	78	3	100	1	100	1	1	0	0	0	0	89	H	133	M	1	L
2537	10	10	100	1	100	1	0.25	72	0	75	0	55	H	116	M	21	L
2538	136	41	100	1	100	1	2	33	0	0	0	118	H	112	M	18	L
2539	0	0	0	60	0	88	1	0	0	0	0	0	L	20	L	0	L
2540	52	52	0	100	0	96	2	79	0	0	0	26	L	14	L	33	H
2541	100	0	100	30	75	90	1.5	1	38	0	0	100	H	12	L	10	L
2543	0	0	0	1	0	73	1	0	0	0	0	0	L	23	L	0	L
2544	17	17	20	80	38	87	1	100	0	75	0	19	L	12	L	29	M
2545	2	2	100	1	2	1	0.25	66	0	0	0	51	H	161	H	17	L
2546	0	0	0	50	100	98	1	0	0	0	0	0	L	17	L	0	L
2547	0	0	100	1	100	1	0.25	0	0	0	20	50	M	151	H	5	L
2548	0	0	0	90	0	98	1	0	0	0	0	0	L	18	L	0	L
2549	0	0	96	1	0	30	0.25	0	72	0	0	48	M	77	M	18	L
2551	39	39	4	95	100	18	0.25	100	0	0	0	21	L	52	L	35	H
2553	113	13	100	50	0	83	1.5	12	0	0	0	107	H	55	L	6	L
2554	0	0	100	1	100	28	0.25	100	100	0	0	50	M	51	L	50	H
2555	36	36	37	100	0	92	1	58	0	0	0	37	M	14	L	24	L
2556	61	61	44	20	0	73	1.5	72	0	75	0	53	H	15	L	33	H
2557	0	0	0	80	0	86	1	0	0	0	0	0	L	19	L	0	L

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2558	0	0	100	1	0	1	0.25	42	0	0	80	50	M	167	H	31	M
2559	0	0	0	50	0	86	1	0	87	0	0	0	L	18	L	22	L
2560	44	44	54	90	100	78	1.5	42	0	75	0	49	M	9	L	22	L
2561	82	42	100	1	100	49	1	98	89	75	0	91	H	32	L	57	H
2562	39	39	71	50	100	72	1	11	100	0	0	55	H	11	L	37	H
2563	0	0	0	1	0	17	0.25	41	95	0	0	0	L	83	M	34	H
2564	0	0	0	70	100	83	1	100	0	0	40	0	L	14	L	35	H
2565	0	0	0	100	100	73	1	81	0	0	0	0	L	13	L	20	L
2566	0	0	0	50	100	98	1	0	0	0	0	0	L	17	L	0	L
2567	0	0	100	40	0	51	1	51	0	0	0	50	M	70	M	13	L
2568	0	0	0	50	0	76	1	69	0	0	0	0	L	19	L	17	L
2569	11	11	64	20	0	52	1	89	0	75	0	37	M	64	M	25	L
2570	5	5	100	20	44	47	0.25	53	0	75	0	53	H	59	M	15	L
2571	96	96	0	1	0	1	1	84	0	0	60	48	M	160	H	60	H
2572	145	47	100	1	78	31	2	47	9	0	0	122	H	52	L	26	M
2573	0	0	0	85	0	98	1	0	0	0	0	0	L	18	L	0	L
2574	0	0	0	80	0	89	1	0	0	0	0	0	L	19	L	0	L
2575	0	0	3	60	100	99	1	100	100	0	0	2	L	11	L	50	H
2576	0	0	0	80	0	98	1	100	0	0	0	0	L	16	L	25	L
2577	10	10	20	1	0	22	0.25	100	0	75	0	15	L	75	M	27	M
2578	0	0	0	1	0	8	0.25	94	0	0	0	0	L	90	M	24	L
2579	100	100	83	1	0	65	1.5	100	0	0	0	91	H	92	M	50	H
2581	65	0	58	60	100	82	1.5	0	0	0	0	61	H	13	L	0	L
2583	100	100	20	20	0	88	1.5	100	0	0	0	60	H	16	L	50	H
2584	14	10	100	1	2	1	0.25	7	19	0	0	57	H	166	H	9	L

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2585	0	0	0	60	0	91	1	100	0	0	0	0	L	17	L	25	L
2586	0	0	46	70	0	78	1	75	0	0	0	23	L	16	L	19	L
2587	0	0	100	1	64	35	0.25	1	101	75	0	50	H	55	M	26	M
2588	24	24	62	20	0	67	1	0	0	75	0	43	M	18	L	6	L
2589	0	0	0	100	0	99	1	100	0	0	0	0	L	15	L	25	L
2590	187	93	100	1	100	16	2	100	0	75	0	143	H	66	M	48	H
2591	128	32	100	1	87	61	2	39	25	0	0	114	H	49	L	24	L
2592	200	100	51	30	100	58	2	100	0	75	0	125	H	41	L	50	H
2593	0	0	0	50	0	1	0.25	0	100	0	0	0	L	156	H	25	L
2594	100	100	6	1	100	98	2	95	0	0	0	53	H	14	L	49	H
2595	53	53	72	80	100	56	1.5	40	0	75	0	63	H	38	L	23	L
2596	0	0	0	80	0	95	1	0	0	0	0	0	L	19	L	0	L
2597	85	53	100	1	7	1	1	42	0	0	0	93	H	145	M	24	L
2598	18	18	100	1	63	1	0.25	17	0	0	0	59	H	152	H	9	L
2599	0	0	0	80	0	92	1	23	0	0	0	0	L	18	L	6	L
2600	0	0	0	30	0	60	1	0	0	0	0	0	L	88	M	0	L
2601	0	0	0	90	0	88	1	0	0	0	0	0	L	18	L	0	L
2603	0	0	0	30	0	88	1	0	0	0	0	0	L	21	L	0	L
2604	3	3	0	1	0	47	0.25	31	0	75	0	1	L	83	M	8	L
2605	0	0	0	70	0	98	1	68	0	0	0	0	L	17	L	17	L
2606	0	0	0	50	0	97	1	0	0	0	0	0	L	20	L	0	L
2607	0	0	0	1	0	58	1	0	23	0	60	0	L	91	M	21	L
2608	100	50	100	1	73	1	1	1	8	0	0	100	H	132	M	14	L
2609	29	0	100	1	100	13	0.25	100	20	75	0	65	H	99	M	30	M
2611	0	0	84	50	100	79	1	0	0	0	0	42	M	15	L	0	L

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2612	0	0	0	50	0	99	1	0	0	0	0	0	L	20	L	0	L
2613	0	0	0	70	0	98	1	100	100	0	0	0	L	14	L	50	H
2614	22	22	100	1	100	48	0.25	0	45	0	0	61	H	126	M	17	L
2616	0	0	0	70	0	91	1	0	0	0	0	0	L	19	L	0	L
2617	35	35	0	10	0	83	1	53	0	75	0	17	L	18	L	22	L
2619	128	43	100	1	43	1	2	35	0	75	0	114	H	109	M	20	L
2620	0	0	0	70	0	98	1	0	0	0	0	0	L	19	L	0	L
2621	0	0	0	20	0	71	1	100	0	0	0	0	L	20	L	25	L
2622	0	0	4	60	0	94	1	100	0	0	0	2	L	17	L	25	L
2623	38	36	100	1	96	1	0.25	0	0	0	0	69	H	143	M	9	L
2624	61	61	12	90	100	96	2	100	0	75	0	37	M	8	L	40	H
2625	0	0	0	10	0	46	0.25	100	0	0	0	0	L	83	M	25	L
2626	0	0	0	30	0	79	1	100	100	0	0	0	L	16	L	50	H
2627	7	7	92	50	100	43	0.25	95	100	0	0	49	M	40	L	50	H
2628	95	95	71	1	85	1	1	86	0	0	20	83	H	122	M	50	H
2629	39	15	100	1	53	6	0.25	13	64	0	0	70	H	67	M	23	L
2630	100	100	7	100	43	94	2	0	0	75	0	54	H	11	L	25	L
2631	79	0	100	1	92	79	1.5	0	100	0	0	90	H	47	L	25	L
2632	0	0	0	90	0	96	1	0	0	0	0	0	L	18	L	0	L
2633	21	21	100	1	100	1	0.25	93	0	75	0	61	H	110	M	29	M
2634	0	0	0	60	100	73	1	0	0	0	0	0	L	17	L	0	L
2635	100	100	0	98	0	83	1.5	100	0	0	0	50	M	13	L	50	H
2636	4	4	12	40	0	95	1	20	0	0	0	8	L	20	L	6	L
2637	80	80	12	90	67	88	1.5	25	0	75	0	46	M	11	L	26	M
2639	0	0	36	75	10	58	1	0	99	0	0	18	L	62	M	25	L

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
2641	0	0	8	100	0	98	1	100	0	0	0	4	L	59	M	25	L
2642	0	0	100	50	0	1	0.25	83	0	0	60	50	M	139	M	36	H
2644	100	100	0	1	0	18	1	100	0	0	0	50	M	76	M	50	H
2645	10	10	44	10	0	1	0.25	82	0	0	0	27	L	166	H	23	L
2646	0	0	0	70	0	78	1	100	0	0	0	0	L	68	M	25	L
2648	44	44	70	30	100	82	1.5	30	0	0	0	57	H	14	L	18	L
2649	161	93	35	80	0	98	2	0	0	75	0	98	H	10	L	23	L
2651	39	0	0	100	0	98	1	0	0	0	0	19	L	16	L	0	L
2653	0	0	0	70	0	98	1	0	0	0	0	0	L	19	L	0	L
2655	0	0	0	70	0	83	1	20	0	0	0	0	L	19	L	5	L
2656	121	40	28	50	0	94	2	0	0	75	0	74	H	13	L	10	L
2657	0	0	0	50	0	98	1	100	0	0	0	0	L	18	L	25	L
2659	200	100	40	60	100	83	2	100	0	0	0	120	H	7	L	50	H
2660	0	0	16	99	0	91	1	196	0	0	0	8	L	12	L	49	H
2661	100	100	0	1	0	56	1.5	0	0	0	0	50	M	82	M	25	L
2662	9	9	100	80	0	1	0.25	22	24	0	0	54	H	131	M	14	L
2663	0	0	0	30	0	58	1	0	0	0	0	0	L	88	M	0	L
2664	0	0	0	90	0	98	1	100	0	0	0	0	L	62	M	25	L
2665	0	0	0	100	0	98	1	0	0	0	0	0	L	18	L	0	L
2667	0	0	100	10	0	64	1	28	0	0	0	50	M	77	M	7	L
2669	100	100	16	1	0	87	1.5	100	0	0	60	58	H	17	L	65	H
2670	0	0	0	50	0	87	1	0	0	0	0	0	L	20	L	0	L
2671	23	23	72	50	100	67	1	100	0	75	0	48	M	10	L	31	M
2672	0	0	0	80	0	91	1	0	49	0	0	0	L	17	L	12	L
4001	19	19	100	50	0	1	0.25	163	0	75	0	60	H	101	M	46	H

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4003	22	22	100	85	9	1	0.25	135	0	0	0	61	H	107	M	39	H
4007	0	0	100	50	0	1	0.25	160	0	75	0	50	H	106	M	40	H
4009	31	31	100	50	0	1	0.25	193	99	75	0	65	H	68	M	81	H
4012	0	0	11	75	100	89	1	100	0	0	0	6	L	13	L	25	L
4013	0	0	0	100	0	96	1	100	0	0	0	0	L	15	L	25	L
4014	0	0	8	95	100	87	1	100	0	0	0	4	L	49	L	25	L
4015	241	241	100	1	100	27	2	103	0	0	0	170	H	51	L	86	H
4016	0	0	100	1	100	1	0.25	11	0	0	0	50	M	149	M	3	L
4020	52	11	100	1	100	1	1	236	0	0	0	76	H	92	M	62	H
4028	85	85	20	55	42	1	1	186	0	0	0	52	H	53	L	68	H
4029	100	100	100	1	100	1	1	154	28	0	0	100	H	90	M	71	H
4035	0	0	68	1	0	66	1	100	0	0	0	34	L	150	M	25	L
4036	0	0	0	100	0	33	0.25	31	17	0	0	0	L	72	M	12	L
4038	0	0	100	1	0	1	0.25	188	0	0	0	50	M	138	M	47	H
4039	0	0	4	100	0	96	1	100	0	0	0	2	L	15	L	25	L
4040	0	0	0	50	0	93	1	100	0	0	0	0	L	18	L	25	L
4041	3	3	100	1	100	1	0.25	169	100	0	80	51	H	93	M	88	H
4042	74	74	29	50	100	75	1.5	100	0	0	0	51	H	12	L	43	H
4043	0	0	32	1	0	47	0.25	195	0	0	0	16	L	72	M	49	H
4044	0	0	100	50	0	1	0.25	200	0	0	100	50	M	116	M	75	H
4049	0	0	100	1	100	1	0.25	224	0	0	0	50	M	107	M	56	H
4050	0	0	0	100	0	87	1	100	0	0	0	0	L	15	L	25	L
4052	31	31	100	1	100	1	0.25	197	0	0	0	65	H	105	M	57	H
4056	0	0	22	50	0	90	1	91	0	0	0	11	L	69	M	23	L
4058	0	0	0	1	0	63	1	0	0	0	0	0	L	140	M	0	L

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4061	0	0	0	70	0	1	0.25	89	0	75	0	0	L	68	M	22	L
4064	0	0	4	100	100	98	1	0	0	0	0	2	L	14	L	0	L
4065	0	0	63	1	0	33	0.25	100	0	75	0	32	L	70	M	25	L
4066	0	0	36	45	0	24	0.25	51	0	75	0	18	L	70	M	13	L
4067	39	39	12	98	0	1	0.25	164	0	0	0	25	L	116	M	51	H
4068	1	1	100	10	0	1	0.25	174	0	75	0	50	H	119	M	44	H
4072	0	0	0	40	0	47	0.25	0	0	0	0	0	L	87	M	0	L
4074	85	85	100	50	100	83	1.5	129	0	0	20	93	H	35	L	58	H
4075	0	0	4	1	0	96	1	14	0		0	2	L	22	L	4	L
4076	8	8	100	1	0	1	0.25	230	68	0	100	54	H	111	M	102	H
4078	0	0	0	100	0	93	1	200	0	0	0	0	L	13	L	50	H
4080	0	0	39	95	0	48	0.25	100	0	0	0	20	L	62	M	25	L
4082	0	0	8	100	0	93	1	125	78	0	0	4	L	12	L	51	H
4083	70	70	12	70	100	78	1.5	100	0	0	0	41	M	12	L	42	H
4086	0	0	100	1	100	1	0.25	111	0	75	0	50	M	111	M	28	M
4087	0	0	93	50	100	1	0.25	113	0	75	0	47	M	93	M	28	M
4093	0	0	0	100	100	90	1	0	94	0	0	0	L	12	L	24	L
4095	0	0	100	1	0	1	0.25	63	0	0	0	50	M	163	H	16	L
4099	13	0	4	100	0	96	1	94	0	0	0	9	L	15	L	24	L
4103	55	55	100	1	0	1	1	225	0	0	0	77	H	117	M	70	H
4104	33	33	24	100	0	61	1	100	0	0	0	29	L	57	M	33	H
4106	96	96	0	100	0	66	1.5	200	0	0	0	48	M	42	L	74	H
4107	0	0	0	60	0	83	1	98	0	0	0	0	L	70	M	25	L
4108	0	0	32	50	100	56	1	0	0	0	0	16	L	69	M	0	L
4109	0	0	14	90	0	83	1	100	0	0	0	7	L	15	L	25	L

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4115	0	0	5	90	0	96	1	72	0	0	0	3	L	65	M	18	L
4119	4	4	89	50	0	1	0.25	205	0	0	0	46	M	117	M	52	H
4120	17	17	100	1	100	1	0.25	185	100	75	0	58	H	69	M	75	H
4122	37	37	0	40	0	79	1	200	0	0	0	18	L	15	L	59	H
4124	93	0	100	1	0	1	1	211	0	0	0	97	H	111	M	53	H
4125	203	203	100	1	100	48	2	100	0	0	0	151	H	73	M	76	H
4127	0	0	23	52	0	67	1	100	0	0	0	12	L	70	M	25	L
4131	0	0	100	1	26	1	0.25	174	0	0	0	50	M	134	M	44	H
4135	0	0	4	50	0	94	1	200	0	0	0	2	L	15	L	50	H
4139	93	93	100	1	100	1	1	126	4		0	97	H	103	M	56	H
4145	16	16	100	1	7	1	0.25	134	52	75	0	58	H	113	M	50	H
4151	0	0	100	1	0	1	0.25	30	0	75	0	50	M	151	H	8	L
4154	0	0	100	1	0	1	0.25	200	0	0	0	50	H	135	M	50	H
4155	13	13	0	1	0	76	1	100	0	0	0	6	L	20	L	28	M
4156	25	25	100	50	0	1	0.25	143	0	0	0	62	H	121	M	42	H
4159	0	0	0	100	0	96	1	0	0	0	0	0	L	18	L	0	L
4160	0	0	39	10	0	69	1	100	0	0	0	20	L	19	L	25	L
4163	0	0	76	1	100	58	1	265	0	0	0	38	M	70	M	66	H
4164	9	9	100	1	100	1	0.25	300	100	0	0	54	H	65	M	102	H
4184	0	0	0	100	0	92	1	200	0	0	0	0	L	13	L	50	H
4186	47	47	92	1	0	17	1	200	0	0	0	70	H	61	M	62	H
4190	90	90	100	1	100	1	1	200	42	0	0	95	H	80	M	83	H
4191	1	0	0	100	0	78	1	60	0	0	0	0	L	17	L	15	L
4192	159	159	100	20	100	1	2	125	0	0	0	130	H	81	M	71	H
4193	202	202	100	1	100	1	2	100	0	0	0	151	H	83	M	76	H

Allotment Number	ALTERNATIVE 4 Indicators (factors)											Estimated Levels Total Score in Category, and Rating (Low, Moderate, High)					
	SMA Soc	SMA E	Recreation	Waiting List	Seasonal	Forage	Admin Efficiency	Wildlife	ESA Fish	S&Gs D	S&Gs E	Social		Demand		Ecological	
4195	189	189	100	1	100	1	2	70	0	0	0	144	H	92	M	65	H
4196	0	0	0	1	0	98	1	0	0	0	0	0	L	23	L	0	L
4197	100	100	100	1	100	1	1	1	0	0	0	100	H	127	M	25	M
4198	101	101	48	1	100	73	1.5	200	25	0	0	75	H	40	L	82	H
4352	0	0	15	99	0	92	1	100	0	0	0	8	L	15	L	25	L

Appendix K: Recreation Management Areas

Overview

Two types of Recreation Management Areas are identified in the land use plan for BLM lands: Special Recreation Management Areas (SRMAs) and Extensive Recreation Management Areas (ERMAs). This appendix only discusses SRMAs. Chapter 2 identifies management actions pertaining to ERMAs.

Managing Recreation Resources for Beneficial Outcomes

This appendix briefly describes the foundation for Benefits Based Management and its application to recreation management. It then summarizes proposed implementation direction for Special Recreation Management Areas in the John Day Basin planning area. General plan direction for each SRMA is detailed in Chapter 2.

The purpose of Benefits Based Recreation (BBR) management is to provide opportunities for visitors to participate in a variety of quality non-motorized and motorized recreation opportunities within specific areas of public lands referred to as Special Recreation Management Areas (SRMA). SRMAs are areas where BLM will focus management and development of facilities, if necessary for public health and safety.

BLM guidance in the BLM planning Handbook H-1610-1 requires the application of a BBR protocol to SRMAs, involving the identification of the Recreation Niche Objectives, Setting, and Actions to help visitors experience quality recreation activities and experiences. Identifying the Appropriate Marketing Strategy is also required for each SRMA, ranging from "Undeveloped" (no marketing at all), or "Community" (working with local communities), or "Designation" (working with state or national markets to bring in visitors outside the area or region).

Within each SRMA, one or more Recreation Management Zones (RMZs) may also be identified. RMZs are "nested" in SRMAs and are usually smaller areas in SRMAs where specific recreation activities occur. RMZs are identified when different opportunities and management exist within the same SRMA boundary. Bridge Creek, North Fork and South Fork of the John Day River are the only SRMAs having one or more RMZs within a SRMA boundary.

Within each SRMA, BLM has also identified related land use allocations that interact with the recreation setting of an area, such as a proposed Off-Highway Vehicle designation, or Visual Resource Management Class. These actions, along with proposed recreation setting combine to influence the type and quality of recreation opportunities and experiences.

The recreation setting can be defined along a continuum ranging from primitive to urban. The planning area contains settings ranging from primitive to rural. Setting character is directly influenced and determined by the management, marketing, and administrative actions of BLM and other recreation-tourism providers. Those actions and the resulting setting character also affect and actually determine the kinds of recreation opportunities being produced.

There are three broad recreation settings categories. The settings include:

- **Physical** – considers the resources and facilities
- **Social** – looks at visitor use
- **Administrative** – management controls and services

The classifications further define the settings within a range of "Primitive" to "Urban". A brief description of the classification is as follows:

- **Primitive (P)** – The landscape is relatively undisturbed with few signs of human presence. Very few encounters with other visitors occur. Regulations and information will normally be posted prior to entering this zone and agency presence is very rare.
- **Back Country (BC)** – The landscape is more natural and the limited improvements tend to blend with the environment. Access does not include motorized vehicles and signing and agency presence is scarce.
- **Middle Country (MC)** – The landscape is natural in appearance with some modifications not highly noticeable. Visitors will encounter other groups utilizing the area, but agency presence is random. Information and signing are present.
- **Front Country (FC)** – The landscape is partially modified with visitors prevalent and agency personnel periodically available. Rules and information are clearly posted.
- **Rural (R)** – Includes a substantially modified landscape with visitors dispersed throughout and a prominent level of agency presence and regulation.
- **Urban** – Not found within the planning area.

Benefits based recreation management objectives focus on specific experiences and beneficial outcomes from recreation activities. In the following pages, these benefits-based management objectives have been written in a one page summary for each SRMA: the John Day River, South and North Forks of the John Day River, Bridge Creek, and Little Canyon Mountain Special Recreation Management Areas (SRMAs).

Public lands along the John Day River will continue to be managed under the 2003 BLM John Day Wild & Scenic River Management Plan. Prescribed Setting descriptions for river segments from Tumwater Falls to Monument (Segments 1, 2, 3, 4, and 6), are from the John Day Wild & Scenic River Management Plan. River Segment 5 is not mentioned because no public lands exist along this river segment.

Each summary identifies proposed marketing, recreation niche, outcome objectives, targeted recreation opportunities, character settings and land use allocations from other resource programs. SRMA specific implementing actions for each SRMA will be contained in the implementation plan for this RMP.

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, and Wheeler counties	Undeveloped

John Day River Segment 1 Recreation Management Zone

(Tumwater Falls to Cottonwood Bridge)

RMZ MARKET NICHE

In the River Zone, visitors engage in day or overnight river based recreation opportunities such as steelhead and bass fishing, rafting, canoeing and kayaking in a scenic river canyon environment. In the Upland Zone, visitors engage in day use, upland bird and deer hunting, photography and sightseeing; in the future, overnight camping in a developed State Park facility.

RMZ OUTCOME OBJECTIVE

Within the River Zone, visitors engage in water-based day use and overnight activities, year-round land-based day uses, boat-in camping, fishing, hiking, sightseeing, photography and wildlife observation experiences. Within the Upland Zone, visitors engage in diverse non-motorized activities such as hiking, upland bird and big game hunting experiences. Both zones provide opportunities for friends and family to participate in scenic water based activities as well as upland recreation experiences in a predominately undeveloped setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e., 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

(See final BLM John Day WSR Plan and LAC Study)

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Steelhead fishing • Bass fishing • Upland bird & big game hunting • Major watercraft take-out for upriver floaters • Driving for pleasureSeasonal motorized boating (Oct. 1 – Apr.30)	• Fishing for pleasure • Being close to nature • Pursue upland birds and challenging big game hunting during seasons • Being with family and friends in a river canyon & upland landscape • Enjoying solitude and/or river canyon scenery while participating in a favorite recreation activity. • Enjoying physical exercise	**Personal:** Greater appreciation for family and friends and natural landscapes. Greater environmental awareness with family & friends. **Community/Social:** Increased awareness of need for community involvement in public land stewardship. **Environmental:** Increased awareness and compliance for protection of natural landscapes. Economic: Increased desirability as a place to visit. Increased contributions to local and regional economy.

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, and Wheeler counties	Undeveloped

John Day River Segment 1 Recreation Management Zone

(Tumwater Falls to Cottonwood Bridge)

PRESCRIBED SETTING CHARACTER: Roaded Natural River

Physical	Social	Administrative
Remoteness: Moderate evidence of the sights and sounds of humans. Opportunities for challenge in a natural environment but less expectation of risk. **Naturalness:** Alterations to the landscape are subtle. Natural characteristics remain dominant. Moderate evidence of human development. Impoundments, diversions or channel modifications may be evident. **Facilities:** Rustic facilities developed for resource protection and to accommodate visitor use. Rustic facilities providing some comfort for the user as well as site protection. Use native materials but with more refinement in design. Synthetic materials should not be evident.	**Social Encounters:** Moderate use occurs – contact with others is expected and occasionally continual, with some chance for isolation. Some evidence of other users. Moderate to high contact with other users, particularly at rapids and access points. Moderate to high contact on access roads. Moderate to low contact on trails and at developed sites. **Visitor Impacts:** Natural ecosystems may be modified by human use. Human impacts obvious but subordinate. Sites may be subtly hardened to accommodate motorized use.	**Visitor Management:** A few on-site visitor management controls or regulations may be expected. Contact with management personnel is frequent. On guided trips, visitors perceive a moderate to low degree of challenge and risk. On-site regimentation and controls are noticeable but harmonize with the natural environment. Simple information facilities.

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**John Day WSR Plan:** Provide public access to river for fishing and rafting, kayaking, boating, emphasizing river-related activities consistent with John Day River Plan. Provide seasonal motorized boating opportunities Oct. 1 – Apr. 30 annually. Seek viable partnership opportunities with user groups, and County and State agencies to provide stated recreation opportunities and help maintain existing public access along the John Day River. **OHV:** Alternative 1: Open. All other alternatives: Limited. **VRM:** Class II for all alternatives.

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, Wheeler, and Grant counties	Undeveloped

John Day River Segment 2 Recreation Management Zone

(Cottonwood Bridge to Clarno)

RMZ MARKET NICHE

In the River Zone, visitors engage in day or overnight river based recreation opportunities, primarily rafting, canoeing, kayaking, bass and steelhead fishing, and camping in a rugged, scenic river canyon environment. In the Upland Zone, visitors engage in e hiking, upland, water fowl (upriver from Thirtymile) deer and big horn sheep hunting, photography and sightseeing. Visitors value these primitive landscapes and enjoy challenging recreation activities with friends and family.

RMZ OUTCOME OBJECTIVE

Within the River Zone, visitors engage in year round water-based day use and overnight activities, rafting, canoeing, kayaking, camping, fishing for smallmouth bass and steelhead, wildlife watching, photography, hiking, sightseeing, and swimming experiences. Within the Upland Zone, visitors engage in non-motorized activities such as chukar, deer and big horn sheep hunting and hiking experiences. Visitors enjoy and value primitive, unconfined recreation activities with family and friends in a predominately undeveloped and rugged setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

(See final BLM John Day WSR Plan and LAC Study)

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Rafting, canoeing, kayaking • Bass fishing • Steelhead fishing • Chukar, deer, and big horn sheep hunting, • Wildlife watching • Photography • Swimming • Camping	• River floating through a highly scenic and rugged primitive basalt river canyon • Being close to nature • Challenging big game hunting • Bass/steelhead fishing for pleasure • Being with family and friends in a river canyon and upland landscape • Enjoying solitude while participating in a favorite recreation activity. • Enjoying physical exercise	**Personal:** Improved physical fitness; stronger ties with family and friends, improved mental well-being, greater environmental awareness for river canyon environment. **Community/Social:** Greater family bonding, improved image of land management agencies, enlarged sense of community dependency and value of public lands. **Environmental:** Increased awareness and compliance for protection of natural landscapes. **Economic:** Increased desirability as a place to visit. Increased contributions to local and regional economy.

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, Wheeler, and Grant counties	Undeveloped

John Day River Segment 2 Recreation Management Zone
(Cottonwood Bridge to Clarno)

PRESCRIBED SETTING CHARACTER: Semi-Primitive Non-Motorized

Physical	Social	Administrative
Remoteness: Few trailed access sites along the river. Fairly high expectation of experiencing isolation from the sights and sounds of humans. Fairly high sense of remoteness. Self-reliance through application of outdoor skills in an environment that offers a high to moderate degree of challenge and risk. Out of sight and sound of human activity. Sense of commitment to river trip and perception of no return. **Naturalness:** Largely undisturbed natural environment. Little evidence of development. No impoundments, diversions or channel modifications. **Facilities:** Minimal facility development primarily for resource protection. Parties on river responsible for human waste disposal and leave no trace camping practices. No facilities for user comfort. Rustic and rudimentary facilities for site protection only. Native material only.	**Social Encounters:** Few contacts with other users, primarily at rapids and access points. Little, but some evidence of other users. Small party size. Very few contacts while on the river (no more than 5.) No more than one other party within sight or sound of a campsite. **Visitor Impacts:** Natural ecosystems operate freely. Human impacts are generally limited to campsites of small to moderate size. Unnoticeable impacts, no site hardening or modification of camp areas.	**Visitor Management:** Only a few subtle on-site visitor management controls or regulations are apparent. Contact with management personnel is occasional. On guided trips, visitors perceive a high to moderate degree of challenge and risk. Low regimentation. No on-site controls or information facilities.

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**John Day WSR Plan:** Provide primitive, non-motorized public access to river for fishing and rafting, kayaking, boating, camping in river area, emphasizing non-motorized river-related activities consistent with John day River Plan and LAC Study. Seek viable partnership opportunities with user groups, private landowners, County and State agencies to provide stated recreation opportunities. Monitor river and upland visitor satisfaction based on stated John Day Plan and LAC. Physical, social and managerial LAC Indicators and Standards for this river segment. **OHV:** Closed to OHV use under all alternatives. **Visual Resource Management:** WSAs are VRM Class I under all alternatives; remaining public lands vary from Class II to Class III.

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, Wheeler, and Grant counties	Undeveloped

John Day River Segment 3 Recreation Management Zone

(Clarno (RM109) to Service Creek (RM157)

RMZ MARKET NICHE

In the River Zone, visitors engage in day or overnight river based recreation opportunities such as steelhead and bass fishing, rafting, canoeing, kayaking, and camping in a scenic river canyon with or without an adjacent road. In the Upland Zone, visitors engage in hiking, upland bird, deer and elk hunting, photography, sightseeing, driving for pleasure and vehicle or walk-in camping in authorized dispersed areas and at the BLM Priest Hole Recreation Site and Service Creek.

RMZ OUTCOME OBJECTIVE

Within the River Zone, visitors engage in water-based day use and overnight activities, year-round land-based day and overnight uses camping, fishing, hiking, sightseeing, photography and wildlife observation experiences. In the Upland Zone, visitors engage in diverse recreation activities such as hiking, upland bird, deer and elk hunting, sightseeing, driving for pleasure and camping experiences in authorized dispersed areas and at the Priest Hole BLM Recreation Site and Service Creek. Both zones provide opportunities for friends and family to participate in scenic water based activities as well as upland recreation experiences in a predominately undeveloped setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

(Final BLM John Day WSR Plan and LAC Study)

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Bass fishing • Steelhead fishing • Upland waterfowl and deer or elk hunting • Camping • Seasonal Motorized Boating (Oct. 1 – Apr. 30)	• Being close to nature • Challenging big game hunting • Fishing for pleasure • Being with family and friends in a river canyon and upland landscape • Enjoying solitude and/or river canyon scenery while participating in a favorite recreation activity • Enjoying physical exercise	Personal: Improved physical fitness, stronger ties with family & friends; improved mental well-being, greater environmental awareness. Community/Social: Greater family bonding, improved image of land management agencies, enlarged sense of community dependency and value of public lands. Environmental: Increased awareness and need to protect natural landscapes and greater environmental stewardship. Economic: Increased desirability as a place to visit. Increased contributions to local and regional economy.

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, Wheeler, and Grant counties	Undeveloped

John Day River Segment 3 Recreation Management Zone

(Clarno (RM109) to Service Creek (RM157)

PRESCRIBED SETTING CHARACTER: Roaded Natural

Physical	Social	Administrative
Remoteness: Moderate evidence of the sights and sounds of humans. Opportunity for challenge in a natural setting but low expectation of risk. **Naturalness:** Alterations to the landscape are subtle. Natural characteristics remain dominant. Moderate evidence of human development. Impoundments, diversions or channel modifications may be evident. **Facilities:** Rustic facilities developed for resource protection and to accommodate visitor use. Rustic facilities providing some comfort for the user as well as site protection. Use native materials but with more refinement in design. Synthetic materials should not be evident.	**Social Encounters:** Moderate use occurs. Contact with others is expected and occasionally continual; some chance for isolation. Some evidence of other users. Moderate to high contact with other users, particularly at rapids and access points. Moderate to high contact on access roads. Moderate to low contact on trails and at developed sites. **Visitor Impacts:** Natural ecosystems may be modified by human use.Human impacts obvious but subordinate. Sites may be subtly hardened to accommodate motorized use.	**Visitor Management:** A few on-site visitor management controls or regulations may be expected. Contact with management personnel is frequent. On guided trips, visitors perceive a moderate to low degree of challenge and risk. On-site regimentation and controls are noticeable but harmonize with the natural environment. Simple information facilities.

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**John Day WSR Plan:** Provide public access to river for fishing and rafting, kayaking, boating, emphasizing river-related activities consistent with John Day River Plan. Seek viable partnership opportunities with user groups, and County and State agencies to provide stated recreation opportunities and help maintain existing public access along the John Day River. Apply administrative actions to maintain Roaded Natural River recreation experiences in River and Uplands consistent with John Day River Plan and LAC Study. Administrative actions include, but are not limited to: identifying camping, boat launch, and boater registration areas. Partnering with the National Park Service to provide consistent interpretative information. Occasional on-site presence. **OHV:** Alternative 1: Open. All other alternatives: Limited. **VRM:** Class II for all other alternatives.

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, and Wheeler counties	Undeveloped

John Day River Segment 4 Recreation Management Zone

(Service Creek to Dayville)

RMZ MARKET NICHE

Visitors drive for pleasure. Dispersed camping on BLM lands, overnight camping opportunities at Mule Shoe: bass and steelhead fishing, boating, wildlife and scenic landscape viewing, photography, swimming, tubing, and picnicking at the BLM Shady Grove Picnic Area.

RMZ OUTCOME OBJECTIVE

Visitor drive for pleasure. Viewing and photographing scenic geologic land formations on BLM and NPS public lands. Some visitors engage in bird and big game hunting experiences. Within the River Zone area, visitors raft from Kimberly to Service Creek, fish, day-use, and some engage in overnight vehicle camping at the BLM Mule Shoe campground, have boat-in camping experiences, or picnics at the BLM Shady Grove Picnic Site. The river and upland areas provide opportunities for friends and family to participate in upland and water based activities in a predominately roadside setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

(Final BLM John Day WSR Plan and LAC Study)

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Driving for pleasure • Sightseeing • Vehicle and boat-in camping • Steelhead fishing • Bass fishing • Upland bird and big game hunting • Watercraft access points • Natural landscape views • Education and interpretation of historic, geologic, and paleontological resources • Motor boating	• Driving and sightseeing for pleasure • Geologic study • Photography • Camping and picnics • Being with family and friends in a river canyon & roadside landscape • Enjoying river canyon scenery while participating in a favorite recreation activity • Enjoying physical exercise	**Personal:** Greater appreciation for family and friends and natural landscapes. Greater environmental awareness with family and friends. **Community/Social:** Increased awareness of need for community involvement in public land stewardship. Environmental: Increased awareness and compliance for protection of natural landscapes. **Economic:** Increased desirability as a place to visit. Increased contributions to local and regional economy.

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, and Wheeler counties	Undeveloped

John Day River Segment 4 Recreation Management Zone

(Service Creek to Dayville)

PRESCRIBED SETTING CHARACTER: Rural

Physical	Social	Administrative
Access: Some parallel roads, bridges, and power lines evident. Highway vehicle and off-road vehicle use is consistent and may be seen from the river. Limited public access due to private land. **Remoteness:** Evidence of sights and sounds of humans common from other river user, traffic, and agricultural activity. Distant sight and/or sound of human activity. **Naturalness:** Modified landscape having both human-made and natural features. Evidence of human development prevalent. Impoundments, diversions or channel modifications may be evident. **Facilities:** Some development for resource protection, visitor comfort due tor number of visitors. Sites developed to provide health/ sanitation. Land-based recreation facility development more prevalent. Some synthetic materials may be used.	**Social Encounters:** Contact with others expected, including frequent interface between river users and shore users. Frequent evidence of other users. Frequent interface between river users and shore users. Moderate to high contact with other river users. **Visitor Impacts:** Ecosystems are modified by human use. Human impacts obvious. Site hardening provided to minimize impacts and to provide for user convenience.	**Visitor Management:** Visitor management controls are visible and expected. Contact with management personnel is frequent. On guided trips visitors perceive a low degree of challenge and risk. Regimentation and controls obvious and numerous, but harmonious. More complex information facilities.

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**John Day WSR Plan:** Provide public access for fishing and rafting, kayaking, boating, consistent with John day River Plan. Seek viable partnership opportunities with user groups, County and State agencies to provide stated recreation opportunities and help maintain existing public access along the John Day River. Apply administrative actions to maintain Rural Developed recreation experiences in River and Uplands consistent with John Day River Plan and LAC Study. Administrative actions include, but not limited to partnering with the National Park Service to provide consistent interpretative information. Occasional on-site presence. **OHV:** Alternative 1: Open. All other alternatives: Limited. **VRM:** Class II

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, and Wheeler counties	Undeveloped

John Day River Segment 6 Recreation Management Zone

(Kimberly to Monument)

RMZ MARKET NICHE

Visitors drive for pleasure. Overnight camping opportunities at Lone Pine and Big Bend BLM Campgrounds; bass and steelhead fishing, boating, wildlife and scenic landscape viewing, photography, swimming, tubing, and picnicking at the BLM Monument picnic/boat take-out/put-in area.

RMZ OUTCOME OBJECTIVE

Visitor drive for pleasure on State Highway 402 along the John Day River. Some visitors engage in bird and big game hunting experiences in the uplands where limited public land exists. Within the River Zone area, visitors raft from Kimberly to Monument, fish, day-use, and some engage in overnight vehicle camping at the BLM Lone Pine and Bid Bend campgrounds, or have boat-in camping experiences, or picnics at the BLM Monument Picnic Site. The river and upland areas provide opportunities for friends and family to participate in upland and water based activities in a predominately roadside setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

(Final BLM John Day WSR Plan)

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Driving for pleasure • Sightseeing • Vehicle and boat-in camping • Steelhead fishing • Bass fishing • Day use • Upland bird and big game hunting • Watercraft access • Natural landscape view • Motorized boating	• Driving and sightseeing for pleasure • Photography • Camping and picnics • Being with family and friends in a river canyon and roadside landscape • Enjoying river canyon scenery while participating in a favorite recreation activity	**Personal:** Greater appreciation for family and friends and natural landscapes. Greater environmental awareness with family & friends. **Community/Social:** Enlarged sense of community dependency and value of public lands. **Environmental:** Greater retention of distinctive natural landscapes. **Economic:** Contribution to local economy.

PRESCRIBED SETTING CHARACTER: Rural

John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Sherman, Gilliam, Umatilla, Morrow, Wasco, and Wheeler counties	Undeveloped

John Day River Segment 6 Recreation Management Zone
(Kimberly to Monument)

Physical	Social	Administrative
Access: Some parallel roads, bridges and power lines evident. Highway vehicle and off-road vehicle use is consistent and may be seen from the river. Limited public access due to private land. **Remoteness:** Evidence of sights and sounds of humans common from other river users and from people off the river. Distant sight and/or sound of human activity. **Naturalness:** Modified landscape having both human-made and natural features. Evidence of human development prevalent. Impoundments, diversions or channel modifications may be evident. **Facilities:** Some facility development for resource protection, visitor comfort and number of visitors. Specific sites developed to provide health/sanitation. Land-based recreation facility development more prevalent. Some synthetic materials may be used.	**Social Encounters:** Contact with others expected, including frequent interface between river users and shore users. Frequent evidence of other users. Frequent interface between river users and shore users. Moderate to high contact with other river users. **Visitor Impacts:** Ecosystems are modified by human use. Human impacts obvious. Site hardening provided to minimize impacts and to provide for user convenience.	**Visitor Management:** Visitor management controls are visible and expected. Contact with management personnel is frequent. On guided trips, visitors perceive a low degree of challenge and risk. Regimentation and controls obvious and numerous, but harmonious. More complex information facilities.

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**John Day WSR Plan:** Provide public access to river for fishing and rafting, kayaking, boating, consistent with John Day River Plan. Maintain existing public access along the John Day River. Continue to provide recreation opportunities on public lands and pull-outs along State Highway 402. Pursue partnerships with the local communities to identify land and water-based recreation opportunities on BLM public lands, emphasizing "Leave No Trace" and "Tread Lightly" principles. Look for opportunities to interpret natural history and past historical events in the area, such as the historic use of a route between Kimberly and Monument. **OHV:** Alternative 1: Open. All other alternatives: Limited. **VRM:** Class II for all alternatives.

South Fork John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Grant and Wheeler counties	Community

River and Upland Recreation Management Zones (RMZs)

MARKET NICHE

In the River Zone, visitors engage in day or overnight river based recreation opportunities such as fishing, day-use, and camping in a scenic river canyon environment. In the Upland Zone, visitors engage in day use and overnight camping, hunting, hiking, mountain bike, horseback riding, and seasonal Class I, II and III motorized use activities. Recreation activities within the Aldrich Mountain WSA are managed to protect wilderness character and provide primitive, unconfined recreation opportunities such as big game hunting, hiking and back-country exploration.

OUTCOME OBJECTIVE

Within the River Zone, visitors engage in water-based day use and overnight activities, year-round land-based day and overnight uses, camping, fishing and driving for pleasure experiences. Within the Upland Zone, visitors engage in diverse non-motorized experiences such as hiking, horseback trail experiences, and big game hunting within the Aldrich Mountain WSA. In other upland areas, visitors engage in these activities and seasonal motorized trail Class I, II and III trail and route riding experiences. Both Recreation Management Zones provide opportunities for friends and family to participate in water based activities in the River Zone, as well as non-motorized and motorized trail experiences in the Upland Zone, in a predominately undeveloped setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES; River/Upland Zones

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
River RMZ: Day-use, fishing, hiking camping, driving for pleasure, wildlife viewing and photography. **Upland RMZ:** Hiking, mountain bike, and horseback trail riding, big game hunting and seasonal motorized trail Class I, II and III trail and route riding. Primitive Recreation in the Aldrich Mtn. WSA.	• Being in a relatively natural landscape • Viewing scenic landscapes • Pursue upland bird and big game during hunting seasons • Fishing for pleasure • Viewing wild horses • Being with family and friends in a river canyon and upland landscape • Finding solitude while participating in a favorite recreation activity • Different types of physical exercise	**Personal:** Greater appreciation for natural landscapes and environmental awareness. **Community/Social:** Increased awareness of need for community involvement in public land stewardship. Increased involvement in recreation and land use decisions. **Environmental:** Increased awareness of "Leave No Trace" and "Tread Lightly" practices on public lands. **Economic:** Increased desirability as a place to visit or work. Positive contributions to local and regional economy.

South Fork John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Grant and Wheeler counties	Community

River and Upland Recreation Management Zones (RMZs)

PRESCRIBED SETTING CHARACTER: Middle Country

Physical	Social	Administrative
River Remoteness: On or near improved gravel roads, but at least ½ mile from highways (FC). **Upland Remoteness:** On or near motorized routes but at least ½ mile from all improved roads, through they may be in sight (MC). **River Naturalness:** Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features (FC). **Upland Naturalness:** Naturally-appearing landscapes except for obvious motorized routes (MC). **River Facilities:** Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets (MC). **Upland Facilities:** Some primitive trails made of native materials such as log bridges and carved wooden signs (BC).	**River Contacts:** 15-29 encounters/day off travel routes and 30 or more encounters/ day on routes (FC). **Upland Contacts:** 7-14 encounters/day off travel routes (e.g., Staging Areas) and 15-29 encounters/day on route (MC). **River Group Size:** 13-25 per group (FC). **Upland Group Size:** 7-12 people per group (MC). **River Evidence of Use:** Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard (FC). **Upland Evidence of Use:** Small areas altered. Vegetation showing wear with some bare soils. Sounds of people occasionally heard (MC).	**River Mechanized Use:** Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use (FC). **Upland Mechanized Use:** Four wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use (MC). **River and Upland Visitor Services:** Basic Maps, but area personnel seldom available to provide on-site assistance (BC). **River and Upland Management Controls:** Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence (MC).

Related Management Prescriptions for River and Upland RMZs

Recreation, Travel, and Visual Resource Management	**Recreation and Travel Management:** OHV use is limited to designated routes with seasonal restrictions in all alternatives. **Visual Resource Management:** For all alternatives, VRM Class II along the South Fork John Day River. VRM Class IV in the Uplands away from the South fork John Day River. VRM Class I in Aldrich Mountain WSA.

North Fork John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Grant, Umatilla, Morrow, and Wheeler Counties	Community

River and Upland Recreation Management Zones

MARKET NICHE

In the River Zone, visitors engage in day or overnight river based recreation opportunities such as fishing, rafting, canoeing, kayaking, day-use, camping and driving for pleasure in a scenic river canyon environment. In the Upland Zone, visitors engage in day use and overnight camping, upland and big game hunting, hiking, mountain bike, horseback riding, and seasonal Class I, II and III motorized use activities.

OUTCOME OBJECTIVE

Within the River Zone, visitors engage in water-based day use and overnight activities, year-round land-based day and overnight uses, river floating, camping, fishing, and driving for pleasure experiences. Within the Upland Zone, visitors engage in diverse non-motorized activities such as hiking, mountain bike, and horseback trail experiences, big game hunting and seasonal motorized trail Class I, II and III trail and route riding experiences. Provide opportunities for friends and family to participate in water based activities in the River Zone, as well as non-motorized and motorized trail experiences in the Upland Zone in a predominately undeveloped setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale; 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
River RMZ: Day-use, fishing, rafting, canoeing, kayaking, motored boating, camping, hiking, driving for pleasure. **Upland RMZ:** Hiking, mountain bike, and horseback trail experiences, big game hunting and seasonal motorized Class I, II and III trail and route riding.	• Explore the landscape • Viewing scenic landscapes • Pursue upland bird and big game during hunting seasons • Fishing for pleasure • Being with family and friends in a river canyon and upland landscape • Finding solitude while participating in a favorite recreation activity • Opportunities for different types of physical exercise	**Personal:** Greater awareness of natural landscapes and environmental awareness. **Community/Social:** Increased awareness of need for community involvement in public land stewardship. Increased involvement in recreation and land use decisions. **Environmental:** Increased awareness of "Leave No Trace" and "Tread Lightly" practices on public lands **Economic:** Increased desirability as a place to visit, live or retire. Positive contributions to local and regional economy.

North Fork John Day River Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Grant, Umatilla, Morrow, and Wheeler Counties	Community

River and Upland Recreation Management Zones

PRESCRIBED SETTING CHARACTER: Middle Country

Physical (River/Upland)	Social (River/Upland)	Administrative (River/Upland)
River Remoteness: On or near motorized routes but at least ½ mile from all improved roads, through they may be in sight (MC). **Upland Remoteness:** More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles (BC). **River and Upland Naturalness:** Naturally-appearing landscapes except for obvious motorized routes (MC). **River Facilities:** Maintained and marked trails, simple trailhead developments, improved signs and very basic toilets (MC). **Upland River Facilities:** Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets (MC). **Upland Facilities:** Some primitive trails made of native materials such as log bridges and carved wooden signs (BC).	**River and Upland Contacts:** 7-14 encounters/day off travel routes (e.g., Staging Areas) and 15-29 encounters/day on route (MC). **River and Upland Group Size:** 7 -12 people group (MC). **River Evidence of Use:** Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard (FC). **Upland Evidence of Use:** Small areas of alteration. Surface vegetation showing wear with some bare soils. Sounds of people occasionally heard (BC).	**River Mechanized Use:** Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use (FC). **Upland Mechanized Use:** Four-wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use (MC). **River Visitor Services:** Area brochures and maps, plus area personnel occasional present to provide on-site assistance (MC). **Upland Visitor Services:** Basic Maps, but area personnel seldom available for on-site assistance (BC). **River and Upland Management Controls:** Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence (MC).

Related Management Prescriptions for River and Upland RMZs

Recreation, Travel, and Visual Resource Management	**Recreation:** Two semi-primitive campgrounds proposed in Alternatives 2-5. Developed campgrounds on the North Fork will be seasonally closed from December 1 thru April 15. Travel Management: Varies by alternative, but all OHV use is limited to designated routes under all alternatives. All alternatives close OHV use seasonally to protect big game, soil and water. Alternatives 1, 3, and 2 have the most interim routes available for OHV use. **Visual Resource Management:** VRM Class III and IV in Alternative 1. VRM Class II and III in all other alternatives.

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and local residents of Mitchell, Fossil, and Service Creek	Community

Sutton Mtn.; Pats Cabin WSAs and Wilderness Character Areas Recreation Management Zones

RMZ MARKET NICHE

Visitors engage in cross-country hiking and primitive overnight camping, big game and upland hunting, hiking, horseback riding, back-country navigation & exploration, photography and rock and fossil study in steep, challenging terrain. Recreation activities within the Sutton and Pats Cabin WSAs and adjacent areas with wilderness characteristics are managed to protect wilderness character and provide primitive, unconfined recreation opportunities listed above. Visitors value these primitive landscapes and enjoy participating in these challenging recreation activities with friends and family

RMZ OUTCOME OBJECTIVE

Visitors engage in cross-country hiking, horseback trail experiences, big game and upland hunting, back-country navigation & exploration, photography and rock/fossil study within the WSAs and areas with wilderness characteristics. Visitors enjoy and value challenging primitive, unconfined recreation activities with family and friends in a predominately undeveloped and rugged setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction..

TARGETED OPPORTUNITIES AND OUTCOMES

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Hiking • Horseback riding • Big game and upland hunting • Back-country exploration • Photography of natural landscapes • Rock and fossil study	• Enjoying physical exercise • Being with family and friends • Enjoying solitude • Enjoying challenging hunting opportunities • Learning more about rocks and fossils • Increasing skills in back-country navigation and trekking • Increased self-confidence • Escaping daily responsibilities	**Personal:** Improved physical fitness; stronger ties with family & friends, improved mental well-being, greater environmental awareness. **Community/Social:** Greater family bonding, improved image of land management agencies, enlarged sense of community dependency and value of public lands. **Environmental:** Increased awareness and need to protect natural landscapes and greater environmental stewardship. **Economic:** Positive contribution to local economy.

PRESCRIBED SETTING CHARACTER: Backcountry

Physical	Social	Administrative
Remoteness: More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles. (BC) **Naturalness:** Naturally-appearing landscape having modifications not readily noticeable. (BC) **Facilities:** None. (P)	**Contacts:** 3-6 encounters/day off travel routes) and 7-15 encounters/day on travel routes. (BC) **Group size:** 7-12 people per group. (BC) **Evidence of Use:** Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent. (BC)	**Mechanized Use:** Limited to approximately 4 miles of designated routes. **Visitor Services:** Basic Maps, but area personnel seldom available to provide on-site assistance. (BC) **Management Controls:** Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare. (BC)

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and local residents of Mitchell, Fossil, and Service Creek	Community
Sutton Mtn.; Pats Cabin WSAs and Wilderness Character Areas Recreation Management Zones	
Related Management Prescriptions: Upland RMZs	
Recreation, Travel, and Visual Resource Management	**Recreation and Travel Management:** Sutton Mountain WSA: OHV use limited to designated routes in all alternatives. Pat's Cabin WSA: closed to OHV use in all alternatives. West Pat's Cabin and Clark Canyon: Closed to OHV use in all alternatives. **Visual Resource Management:** Sutton and Pat's Cabin: VRM I for all Alternatives. Clark Canyon: VRM Class II for all alternatives. West of Pat's Cabin: Alternative 1 is VRM III and all other Alternatives is VRM II.

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and local residents of Mitchell, Fossil, and Service Creek	Community

Sutton Mountain Back Country Byway Recreation Management Zone

RMZ MARKET NICHE

By driving or biking around Sutton Mountain on State and County roads, visitors and residents enjoy year-round scenic viewing. By visiting roadside information kiosks at selected locations, visitors learn about its natural history, geology and paleontological features and early settlement history of Bridge Creek. Visitors and local residents see and value wide open spaces and landscapes of the Sutton Mountain, Pat's Cabin and Painted Hills areas. Visitors enjoy hiking on selected trail routes, and learning about local history and natural features.

RMZ OUTCOME OBJECTIVE

The Sutton Mountain Byway provides visitors and residents opportunities to enjoy the scenic beauty of Sutton Mountain, Pat's Cabin and Painted Hills areas, while also increasing knowledge and appreciation of their natural history and early settlement history. Visitors drive or bike around Sutton Mountain on State and County roads and view open scenic landscapes, stopping to view information at interpretative kiosks along the byway. Visitors enjoy hiking on selected trail routes. Visitors realize a moderate level of satisfaction for two or more recreation activities, i.e., 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.

TARGETED OPPORTUNITIES AND OUTCOMES

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Driving for pleasure • Photography • Motorcycle and bike touring • Hiking selected trail routes • Natural landscape views • Education and Interpretation of Geologic, Paleontological resources, and historic values	• Opportunities for learning early history of Bridge Creek and natural history • Enjoying open spaces and scenery • Being close to nature • Sharing experiences with all ages of family and friends	**Personal:** Increased awareness and appreciation for natural landscapes and formation of geologic and paleontological features and early history of the Bridge Creek area. **Community/Social:** Increased community connection to natural processes and historic community "roots". **Environmental:** Increased awareness for protecting and interpreting of natural landscapes and historic locations. **Economic:** Economic development with local communities and other entities resulting from more visitors to the Byway.

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and local residents of Mitchell, Fossil, and Service Creek	Community

Sutton Mountain Back Country Byway Recreation Management Zone

PRESCRIBED SETTING CHARACTER: Rural

Physical	Social	Administrative
Remoteness: On or near paved primary highways, but still within a rural area. (R)	**Contacts:** 30 or more encounters/day on byway during summer months. Less encounters in off-season. (FC)	**Mechanized Use:** Ordinary highway auto, truck, motorcycle and bike traffic is characteristic. (R)
Naturalness: Landscape partially modified by roads/trails, utility lines, etc, but none overpower natural landscape features. (FC)	**Group Size:** 13-25 people per group in summer months; less people per group in off-season (FC)	**Visitor Services:** Basic maps, but area personnel seldom available to provide on-site assistance. (BC)
Facilities: Adjacent or within the vicinity of improved yet modest, rustic facilities such as primitive campsites, basic restrooms, trails and interpretative sign. (FC)	**Evidence of Use:** Small areas of alteration prevalent. Surface vegetation gone with impacted soils observed. Sounds of people regularly heard. (FC)	**Management Controls:** Signs at key access or pull-out points along byway. Would have motorized use restrictions adjacent to byway. Random law enforcement presence. (BC)

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	Coordinate management with State and County road departments for sustained, year-round use on the Byway and identify safe roadside pull-outs for education and interpretative kiosks. Manage recreation use to ensure no cross-country use occurs off Byway. Manage trail hiking opportunities are available on selected trail routes. Pursue partnerships with local, state, federal agencies and organizations, if consistent with RMZ outcome objectives and management for on and off site education and interpretation of geologic resources, paleontological resources, explorers and early settlers of the Bridge Creek Area.

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and local residents of Mitchell, Fossil, and Service Creek	Community

Sand Mountain Recreation Management Zone

RMZ MARKET NICHE

Visitors engage in cross-country hiking and primitive overnight camping, big game and upland bird hunting, hiking, horseback riding, photography and rock and fossil study in undulating terrain. Recreation activities within the Sand Mountain area are managed to retain the existing landscape character and provide primitive, unconfined recreation opportunities. Visitors value these primitive landscapes and enjoy participating in these recreation activities with friends and family.

RMZ OUTCOME OBJECTIVE

Visitors engage in cross-country hiking, horseback trail experiences, big game and upland bird hunting, and photography. Visitors enjoy and value primitive, unconfined recreation activities with family and friends in a predominately undeveloped setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Hiking • Horseback riding • Big game and upland bird hunting • Photography of natural features • Rock and fossil study • Possibly mountain biking	• Enjoying physical exercise • Being with family & friends • Enjoying solitude • Enjoying challenging hunting opportunities • Learning more about rocks and fossils • Escaping daily responsibilities	**Personal:** Improved physical fitness, stronger ties with family and friends, improved mental well-being, greater environmental awareness. **Community/Social:** Greater family bonding, improved image of land management agencies, enlarged sense of community dependency and value of public lands. **Environmental:** Increased awareness and need to protect natural landscapes and greater environmental stewardship. **Economic:** Positive contribution to local economy.

PRESCRIBED SETTING CHARACTER: Backcountry

Physical	Social	Administrative
Remoteness: More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles (BC). **Naturalness:** Naturally-appearing landscape except for obvious Juniper treatment areas on landscape (MC). **Visitor Services:** None	**Contacts with other groups:** 3-6 encounters/day off travel routes and 7-15 encounters/day on travel routes (BC). **Group Size:** 4-6 people per group (BC). **Evidence of Use:** Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent (BC).	**Mechanized Use:** All non-motorized use; perhaps mountain bike use (BC). **Visitor Services:** Basic maps, but area personnel seldom available to provide on-site assistance (BC). **Management Controls:** Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare (BC).

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**Recreation and Travel Management:** OHV use limited to designated routes in all alternatives. **Visual Resource Management:** VRM Class II in all alternatives.

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and local residents of Mitchell, Fossil, and Service Creek	Community

Golden Triangle Recreation Management Zone

RMZ MARKET NICHE

Alternatives 1, 2, and 5: Visitors engage in casual use on local motorized trail and route opportunities in a juniper-forested setting.

Alternative 3: Visitors engage in casual cross-country motorized use.

Alternative 4: Visitors engage in non-motorized recreation activities.

RMZ OUTCOME OBJECTIVE

Depending on the RMP alternative, visitors engage in either motorized, or shared-use, or non-motorized trail and route experiences within a forested setting to realize a moderate level of satisfaction for one or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

Activity Opportunities* (*depends on RMP alternative)	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Class I – ATV riding • Class II – 4x4 driving • Class III- Motorcycle riding • Mountain bike riding	• Enjoy Scenery • Experience casual trail riding or route driving with family and friends • Experience challenging motorized or non-motorized trail riding, depending on the land use RMP alternative. • Opportunities for different types of physical exercise	**Personal:** Greater environmental awareness with family and friends. **Community/Social:** Increased awareness of need for community involvement in public land stewardship. Increased involvement in recreation and land use decisions. **Environmental:** Increased awareness of "Leave No Trace" and "Treading Lightly" practices on public lands **Economic:** Increased desirability as a place to visit, live or retire. Positive contributions to local and regional economy.

PRESCRIBED SETTING CHARACTER: Middle Country

Physical	Social	Administrative
Remoteness: On or near improved gravel roads but at least ½ mile from Highways (FC). **Naturalness:** Landscape partially modified by roads/trails, utility lines, etc; but none overpower natural landscape features (FC). **Facilities:** Maintained & marked trails, simple trailhead developments, improved signs and very basic toilets (MC).	**Contacts:** 7-14 encounters day off travel routes and 15-29 encounters/day on routes (MC). **Group Size:** 7-12 people per group (MC). **Evidence of Use:** Small areas of alteration prevalent. Surface vegetation gone with impacted soils observed. Sounds of people regularly heard (FC).	**Mechanized Use:** Four-wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use (MC). **Visitor Services:** Basic maps, but area personnel seldom available to provide on-site assistance (BC). **Management Controls:** Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence (MC).

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and local residents of Mitchell, Fossil, and Service Creek	Community

Golden Triangle Recreation Management Zone	
Related Management Prescriptions	
Recreation, Travel, and Visual Resource Management	**Recreation and Travel Management:** OHV use limited to designated routes in Alternatives 1,2 and 5. Casual cross-country OHV use in Alternative 3 and non-motorized use only in Alternative 4. **Visual Resource Management:** VRM Class IV in Alternative 1 and VRM Class III in all other alternatives

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and Local residents of Mitchell, Fossil and Service Creek	Community

Gable Creek Recreation Management Zone

RMZ MARKET NICHE

Visitors engage in local motorized and non-motorized trail opportunities in a juniper woodland setting

RMZ OUTCOME OBJECTIVE

Visitors engage in trail experiences within a woodland setting, to realize a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Class I – ATV riding • Class II – 4x4 driving • Class III- Motorcycle riding • Horseback riding • Hiking • Mountain Biking	• Experience challenging trail riding • Viewing Scenic landscapes • Pursue upland bird and big game during hunting seasons • Opportunities for different types of physical exercise	**Personal:** Greater environmental awareness with family and friends. **Community/Social:** Increased awareness of need for community involvement in public land stewardship. Increased involvement in recreation and land use decisions. **Environmental:** Increased awareness of "Leave No Trace" and "Treading Lightly" practices on public lands. **Economic:** Increased desirability as a place to visit, live or retire. Positive contributions to local and regional economy.

PRESCRIBED SETTING CHARACTER: Middle Country

Physical	Social	Administrative
Remoteness: On or near improved gravel roads but at least ½ mile from highways (FC). **Naturalness:** Naturally-appearing landscapes except for obvious motorized routes (MC). **Facilities:** Some primitive trails made of native materials such as log bridges and carved wooden signs (BC).	**Contacts:** 3-6 encounters/day off travel routes and 7-15 encounters/ day on travel routes (BC). **Group Size:** 7-12 people per group (MC). **Evidence of Use:** Small areas of alteration prevalent. Surface vegetation gone with impacted soils observed. Sounds of people regularly heard (FC).	**Mechanized Use:** Four-wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use (MC). **Visitor Services:** Basic maps, but area personnel seldom available to provide on-site assistance (BC). **Management Controls:** Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare (BC).

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**Recreation and Travel Management:** OHV use limited to designated routes in all alternatives. **Visual Resource Management:** VRM Class III in all alternatives.

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and local residents of Mitchell, Fossil, and Service Creek	Community

Logging Road South Recreation Management Zone

RMZ MARKET NICHE

Residents and visitors engage in motorized Class I, II and III opportunities on designated trails and routes in a juniper woodland landscape.

RMZ OUTCOME OBJECTIVE

Visitors engage in Class I, II and III motorized travel on designated routes within a juniper woodland area. Visitors enjoy and value motorized recreation activities with family and friends in a predominately undeveloped setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Class I – ATV riding • Class II – 4x4 driving • Class III- Motorcycle riding	• Enjoy Scenery • Experience trail riding or driving experiences • Interact with other community users • Enjoy physical exercise	**Personal:** Improved physical fitness, stronger ties with family & friends, improved mental well-being, greater environmental awareness. **Community/Social:** Enlarged sense of community dependency and value of public lands. **Environmental:** Manage public lands for enjoyable recreational use in an environmentally responsible manner by limiting all use to designated routes and trails. **Economic:** Positive contributions to local/regional economy.

PRESCRIBED SETTING CHARACTER: Middle Country

Physical	Social	Administrative
Remoteness: On or near improved gravel roads but at least ½ mile from highways (FC). **Naturalness:** Naturally-appearing landscapes except for obvious motorized routes (MC). **Facilities:** Some primitive trails made of native materials such as log bridges and carved wooden signs (BC).	**Contacts:** 15-29 encounters/day on routes (MC). **Group Size:** 7-12 people per group (MC). **Evidence of Use:** Small areas of alteration prevalent. Surface vegetation gone with impacted soils observed. Sounds of people regularly heard (FC).	**Mechanized Use:** Four-wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use (MC). **Visitor Services:** Basic maps, but area personnel seldom available to provide on-site assistance (BC). **Management Controls:** Regulatory signing clearly posted. Motorized and mechanized use restrictions. Random enforcement presence (MC).

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**Recreation and Travel Management:** OHV use limited to designated routes in all alternatives. **Visual Resource Management:** VRM Class III in all alternatives.

Bridge Creek Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Regional visitors and local residents of Mitchell, Fossil, and Service Creek	Community

Priest Hole Triangle Recreation Management Zone

RMZ MARKET NICHE

Residents and visitors engage in motorized and non-motorized opportunities near a upland river canyon area setting.

RMZ OUTCOME OBJECTIVE

By the year 2016, visitors engage in upland and big game hunting, hiking, mountain biking, motorized travel on designated routes and photography of the adjacent John Day River canyon area. Visitors enjoy and value these recreation activities with family and friends in a predominately undeveloped setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e., 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.

TARGETED OPPORTUNITIES AND OUTCOMES

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Driving or riding for pleasure • Natural landscape views • Hiking • Mountain biking • Upland and Big game • hunting • Photography of natural landscapes	• Being with family and friends • Enjoying hunting opportunities • Escaping daily responsibilities • Enjoying physical exercise	**Personal:** Improved physical fitness; stronger ties with family and friends, improved mental well-being, greater environmental awareness. **Community/Social:** Enlarged sense of community dependency and value of public lands. **Environmental:** Greater retention of distinctive natural landscapes. **Economic:** Positive contribution to local economy.

PRESCRIBED SETTING CHARACTER: Middle Country

Physical	Social	Administrative
Remoteness: On or near improved gravel roads but at least ½ mile from highways. (FC) **Naturalness:** Naturally-appearing landscapes except for obvious motorized routes. (MC) **Facilities:** Some primitive trails made of native materials such as log bridges and carved wooden signs. (BC)	**Contacts:** 3-6 encounters/day off travel routes and 7-15 encounters/day on travel routes. (BC) **Group Size:** 7-12 people per group. (MC) **Evidence of Use:** Small areas of alteration prevalent. Surface vegetation gone with impacted soils observed. Sounds of people regularly heard. (FC)	**Mechanized Use:** Four-wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use (MC) **Visitor Services:** Basic Maps, but area personnel seldom available to provide on-site assistance (BC). **Management Controls:** No visitor controls apparent. No use limits. Enforcement presence rare.

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**Recreation and Travel Management:** OHV use limited to designated routes in all alternatives. **Visual Resource Management:** Alternative 1: VRM Class II within view of the John Day River; VRM Class IV away from river. Action Alternatives: VRM Class II within view of the John Day River; VRM Class III away from river.

Little Canyon Mountain Special Recreation Management Area

SRMA PRIMARY MARKET STRATEGY	SRMA MARKET
Local communities in Grant County	Community

Little Canyon Mountain Recreation Management Zone (RMZ)

MARKET NICHE

Visitors engage in local motorized and non-motorized trail opportunities in a forested setting

OUTCOME OBJECTIVE

Visitors engage in trail experiences within a forested setting, realizing a moderate level of satisfaction for two or more recreation activities (i.e. 3.0 on a probability scale where 1 = not at all; 2 = somewhat; 3 = moderate; 4 = total satisfaction.)

TARGETED OPPORTUNITIES AND OUTCOMES

Activity Opportunities	Experience Opportunities and Outcomes	Benefit Opportunities and Outcomes
• Class I – ATV riding • Class II – 4x4 driving • Class III- Motorcycle riding • Horseback riding • Hiking • Mountain Biking	• Viewing Scenic landscapes • Experience challenging trail riding • Interact with other community users • Opportunities for different types of physical exercise	**Personal:** Greater environmental awareness. **Community/Social:** Greater community involvement in recreation and land use decisions. Reduced social isolation. Improved functioning in community. **Environmental:** Manage previously disturbed or unclaimed mining areas for recreational use on public land. **Economic:** Increased desirability as a place to live or retire. Positive contributions to local/regional economy.

PRESCRIBED SETTING CHARACTER: Front Country

Physical	Social	Operational
Remoteness: On or near improved gravel roads but at least ½ mile from Highways (FC). **Naturalness:** Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features (FC). **Facilities:** Maintained and marked trails, simple trailhead developments; improved signs and very basic toilets (MC).	**Contacts:** 7-14 encounters off travel routes and 15-29 encounters/ day on routes (MC). **Group Size:** 7-12 people per group (MC). **Evidence of Use:** Small areas of alteration prevalent. Surface vegetation gone with impacted soils observed. Sounds of people regularly heard (FC).	**Mechanized Use:** Four-wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use (MC). **Visitor Services:** Area brochures and maps, plus area personnel occasional present to provide on-site assistance (MC). **Management Controls:** Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence (FC).

Related Management Prescriptions

Recreation, Travel, and Visual Resource Management	**Recreation and Travel Management:** Alternative 1 allows cross-country OHV use. All other alternatives limit OHV use to designated routes. OHV use and the type of OHVs in North and South pits vary by alternative. See Chapter 2 for differences between alternatives for OHV and other recreation use. **Visual Resource Management:** VRM Management Class II for all alternatives.

Appendix L: Existing Rights-of-Way

Serial Number	Name	Type		Serial Number	Name	Type
ME_P-21		TRLRD		OR 7586		RD
ME-P-10		PIPELINE		OR 7586		RD
ME-P-11		RD		OR 7586		RD
ME-P-16		PIPELINE		OR 7586		RD
ME-P-18		FENCE		OR 7586		RD
ME-P-20		CULTURAL		OR 7586		RD
ME-P-20		CULTURAL		OR 7586		RD
ME-P-20		RD		OR 7586		RD
ME-P-21		FENCE		OR 7586		RD
ME-P-21		FENCE		OR 7586		RD
ME-P-4		PIPELINE		OR 8530		TEL
ME-P-6		RD PIPELINE		OR 8530		TEL
ME-P-8		PIPELINE		OR 8705	OR	HWY
ME-P-9		FENCE		OR 9493		RD
ME-P-9		FENCE		OR 9493		RD
OR 10164		PWR		OR 9554		WELL
OR 10164		PWR		OR 9848		PWR
OR 10164		PWR		OR 9848		PWR
OR 10407		PWR		RE_P-57		TRL PIPE
OR 10407		PWR		RE_P-64		RD
OR 10407		PWR		RE_P-83		RD
OR 10407		PWR		RE_P-86		TRL
OR 10407		PWR		RE-02-10		RD
OR 10407		PWR		RE-02-10		RD
OR 10407		RD		RE-02-10		RD
OR 10407	BPA	PWR		RE-02-10		RD
OR 10407		RD		RE-02-10		RD
OR 10407		RD		RE-02-10		RD
OR 10407	BPA	PWR		RE-02-111		RD
OR 10407	BPA	PWR		RE-02-112	L STOUT	RD
OR 10407		RD		RE-02-112	L STOUT	RD
OR 10407		RD		RE-02-112		RD
OR 10407		RD		RE-02-112		RD
OR 10407	BPA	PWR		RE-02-112		RD
OR 10556		GAS		RE-02-112		RD

Serial Number	Name	Type		Serial Number	Name	Type
OR 10556		GAS		RE-02-112		RD
OR 10556		GAS		RE-02-112		RD
OR 10556		GAS		RE-02-112		RD
OR 10556		GAS		RE-02-112		RD
OR 10556		GAS		RE-02-114		RD
OR 11269		RD		RE-02-117		RD
OR 11269		RD		RE-02-117		RD
OR 11269		RD		RE-02-117		RD
OR 11269		RD		RE-02-117		RD
OR 11269		RD		RE-02-119		RD
OR 12149		RD		RE-02-128		RD
OR 12824	OR 19	RD		RE-02-128		RD
OR 12971		HWY		RE-02-128		RD
OR 13824		GAS		RE-02-128		RD
OR 13824		GAS		RE-02-129		RD
OR 13824		GAS		RE-02-130		RD
OR 13824		GAS		RE-02-132		RD
OR 14199		RAILROAD		RE-02-133		RD
OR 15772		RD		RE-02-134		RD
OR 15821		RD		RE-02-134		RD
OR 15821		RD		RE-02-136		RD
OR 15821		RD		RE-02-139		RD
OR 15821		RD		RE-02-139		RD
OR 15910	BPA	PWR		RE-02-139		RD
OR 15910		RD		RE-02-140		RD
OR 15910	BPA	PWR		RE-02-141		RD
OR 15910	BPA	PWR		RE-02-150		RD
OR 15910	BPA	PWR		RE-02-151		RD
OR 16216	ONF 58	RD		RE-02-151		RD
OR 1668		PWR		RE-02-151		RD
OR 16817		TEL		RE-02-151		RD
OR 16847		RD		RE-02-160		RD
OR 16847		RD		RE-02-163		RD
OR 16847		RD		RE-02-163		RD
OR 168998		PWR		RE-02-165		RD
OR 168998		PWR		RE-02-166		RD
OR 17530		TEL		RE-02-166		RD
OR 17530		TEL		RE-02-166		RD
OR 18632		RD		RE-02-166		RD
OR 18632		RD		RE-02-166		RD

Serial Number	Name	Type		Serial Number	Name	Type
OR 18632		RD		RE-02-18		RD
OR 18714	BPA	RD		RE-02-18		RD
OR 18714	BPA	PWR		RE-02-18		RD
OR 18714	BPA	PWR		RE-02-18		RD
OR 18714	BPA	RD		RE-02-18		RD
OR 18714	BPA	RD		RE-02-190		FENCE
OR 18714	BPA	RD		RE-02-190		FENCE
OR 18714		PWR		RE-02-191		RD
OR 18714		PWR		RE-02-191		RD
OR 18714		PWR		RE-02-191		RD
OR 1923	OR 218	RD		RE-02-193		RD
OR 1923	OR 218	RD		RE-02-196		PIPELINE
OR 1923	OR 218	RD		RE-02-196		PIPELINE
OR 20299		RD		RE-02-200		RD
OR 20299		RD		RE-02-200		RD
OR 2158		RD		RE-02-210		RD
OR 2158		RD		RE-02-211		RD
OR 2158		RD		RE-02-212		RD
OR 2158		RD		RE-02-213		RD
OR 2158		RD		RE-02-213		RD
OR 2158		RD		RE-02-213		RD
OR 2158		RD		RE-02-213		RD
OR 2158		RD		RE-02-213		RD
OR 2158		RD		RE-02-214		RD
OR 2212		RD		RE-02-214		RD
OR 24421		TEL		RE-02-215		RD
OR 24421		TEL		RE-02-216		RD
OR 24421		TEL		RE-02-217		RD
OR 2451		PWR		RE-02-218		RD
OR 2451		PWR		RE-02-218		RD
OR 2451		PWR		RE-02-218		RD
OR 2451		PWR		RE-02-221		RD
OR 2451		PWR		RE-02-221		RD
OR 2451		PWR		RE-02-40		RD
OR 2451		PWR		RE-02-40		RD
OR 2451	BPA	PWR		RE-02-43		RD
OR 2451	BPA	PWR		RE-02-43		RD
OR 2451	BPA	PWR		RE-02-43		RD
OR 2451	BPA	PWR		RE-02-43		RD
OR 25747		TEL		RE-02-74		RD

Serial Number	Name	Type		Serial Number	Name	Type
OR 25747		TEL		RE-02-75		RD
OR 25747		TEL		RE-02-75		RD
OR 25747		TEL		RE-02-75		RD
OR 25747		TEL		RE-02-75		RD
OR 25747		TEL		RE-02-75		RD
OR 25747		TEL		RE-02-75		RD
OR 26706		RD		RE-02-75		RD
OR 26708		WATER-PIPE		RE-02-75		RD
OR 34235		PWR		RE-02-RE-02-75		RD
OR 343235		PWR		RE-2-214		RD
OR 343235		PWR		RE-2-214		RD
OR 343235		PWR		RE-2-214		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3471		PWR		RE-B-3		RD
OR 3514		RD		RE-B-3		RD
OR 3514		RD		RE-B-3		RD
OR 3514		RD		RE-B-3		RD
OR 35146		TEL		RE-B-3		RD
OR 35890		RD		RE-B-3		RD
OR 35890		RD		RE-B-3		RD
OR 35958		PWR		RE-B-3		RD
OR 36187		TEL		RE-B-3		RD
OR 36187		TEL		RE-B-3		RD
OR 36220		RES		RE-B-3		RD
OR 37393		PWR		RE-B-3		RD
OR 40270		TEL		RE-B-3		RD
OR 40270		TEL		RE-B-3		RD
OR 40270		TEL		RE-B-3		RD
OR 40270		TEL		RE-B-3		RD
OR 40270		TEL		RE-B-3		RD

Serial Number	Name	Type		Serial Number	Name	Type
OR 40270		TEL		RE-B-3		RD
OR 40270		TEL		RE-B-3		RD
OR 40412		RD		RE-B-3		RD
OR 40412		RD		RE-B-3		RD
OR 41397		RD		RE-B-3		RD
OR 41424		RD		RE-B-3		RD
OR 41424		RD		RE-B-3		RD
OR 41424		RD		RE-B-3		RD
OR 41427		RD		RE-B-3		RD
OR 4156	GC 3070	RD		RE-B-3		RD
OR 4156	GC 3070	RD		RE-B-3		RD
OR 4156	GC 3070	RD		RE-B-3		RD
OR 41799		TEL		RE-B-3		RD
OR 42314		RD		RE-B-3		RD
OR 44536		RD		RE-B-3		RD
OR 44536		RD		RE-B-3		RD
OR 44536		RD		RE-B-3		RD
OR 44536		RD		RE-B-3		RD
OR 44536		RD		RE-B-3		RD
OR 44536		RD		RE-B-3		RD
OR 44536		RD		RE-B-3		RD
OR 44536		RD		RE-B-3		RD
OR 44536		RD		RE-B-3		RD
OR 44605	GC 3407	RD		RE-B-3		RD
OR 44605	GC 3407	RD		RE-B-3		RD
OR 44605	GC 15	RD		RE-B-3		RD
OR 44703		TEL		RE-B-3		RD
OR 44703		TEL		RE-B-3		RD
OR 44703		TEL		RE-B-3		RD
OR 44703		TEL		RE-B-3		RD
OR 46103		TEL		RE-B-3		RD
OR 4704		PWR		RE-B-3		RD
OR 4704		PWR		RE-B-3		RD
OR 4704		PWR		RE-B-3		RD
OR 4704		PWR		RE-B-3		RD
OR 4704		PWR		RE-B-3		RD
OR 4704		PWR		RE-B-3		RD
OR 4704		PWR		RE-B-3		RD
OR 4704		PWR		RE-B-3		RD
OR 47830		CANAL		RE-B-3		RD

Serial Number	Name	Type		Serial Number	Name	Type
OR 51958		TEL		RE-B-3		RD
OR 53868	CENTURY TEL	TEL		RE-B-3		RD
OR 54099	S LEMONS	WATER-PIPE		RE-B-3		RD
OR 55097	P SARI	RD		RE-B-3		RD
OR 55097	P SARI	RD		RE-B-3		RD
OR 5534		PWR		RE-B-3		RD
OR 56243	FS 4795	RD		RE-B-3		RD
OR 56243	FS 4795	RD		RE-B-3		RD
OR 56243	FS 4795	RD		RE-B-3		RD
OR 56243	FS 4795	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56561	L STOUT	RD		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD

Serial Number	Name	Type		Serial Number	Name	Type
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56872	OREGON TRAIL EL CO-OP	PWR		RE-B-3		RD
OR 56888	C WOOD	WATER-PIPE		RE-B-3		RD
OR 56888	C WOOD	WATER-PIPE		RE-B-3		RD
OR 56897	T MCDONALD	RD		RE-B-3		RD
OR 56897	T MCDONALD	RD		RE-B-3		RD
OR 57533	CENTURY TEL	TEL		RE-B-3		RD
OR 57977	T GROO	RD		RE-B-3		RD
OR 58199	J KELLY	RD		RE-B-3		RD
OR 58200	D SHANAFELT	WATER-PIPE		RE-B-4		RD
OR 58251	TUDOR/MUELLER	RD		RE-P-1		RD
OR 58251	TUDOR/MUELLER	RD		RE-P-1		RD
OR 58251	TUDOR/MUELLER	RD		RE-P-1		RD
OR 58291	L&P STOUT	RD		RE-P-1		RD
OR 58291	L&P STOUT	RD		RE-P-1		RD
OR 58947	J&L RECKLING	RD		RE-P-1		RD
OR 59642	G GRIFFITH	RD		RE-P-1		RD
OR 60143	TEEVIN BROS L&C	RD		RE-P-100		RD
OR 60168		WATER-PIPE		RE-P-100		RD
OR 60168		WATER-PIPE		RE-P-100		RD
OR 6046		PWR		RE-P-100		RD

Serial Number	Name	Type		Serial Number	Name	Type
OR 6046		PWR		RE-P101		RD
OR 6046		PWR		RE-P101		RD
OR 6046		PWR		RE-P-101		RD
OR 6059		RD		RE-P-101		RD
OR 60685	SMITH PROPERTIES INC	WATER-PIPE		RE-P-101		RD
OR 60685	SMITH PROPERTIES INC	RD		RE-P-101		RD
OR 60879	CENTURY TEL	TEL		RE-P-102		RD
OR 6211	GC 63	RD		RE-P-102		RD
OR 6211	GC 63	RD		RE-P-105		RD
OR 6211	GC 63	RD		RE-P-107		RD
OR 6211	GC 63	RD		RE-P-107		RD
OR 6211	GC 63	RD		RE-P-107		RD
OR 6211	GC 63	RD		RE-P-107		RD
OR 6305		RD		RE-P-107		RD
OR 6305		RD		RE-P-109		RD
OR 6305		RD		RE-P-110		RD
OR 6306		RD		RE-P-114	CROWN PACIFIC	RD
OR 6306		RD		RE-P-115		RD
OR 6306		RD		RE-P-116	CROWN PACIFIC	RD
OR 6306		RD		RE-P-117		RD
OR 6306		RD		RE-P-117		RD
OR 6306		RD		RE-P-117		RD
OR 6306		RD		RE-P-117		RD
OR 6306		RD		RE-P-117		RD
OR 6306		RD		RE-P-120		RD
OR 6306		RD		RE-P-122		RD
OR 6306		RD		RE-P-123		RD
OR 6306		RD		RE-P-126		RD
OR 6306		RD		RE-P-126		RD
OR 6306		RD		RE-P-126		RD
OR 6306		RD		RE-P-126		RD
OR 6306		RD		RE-P-127		RD
OR 6306		RD		RE-P-127		RD
OR 6315		RD		RE-P-128		RD
OR 6315		RD		RE-P-128		RD
OR 6315		RD		RE-P-132		RD
OR 6315		RD		RE-P-133		RD
OR 6315		RD		RE-P-16		RD

Serial Number	Name	Type		Serial Number	Name	Type
OR 6315		RD		RE-P-16		RD
OR 6315		RD		RE-P-16		RD
OR 6315		RD		RE-P-16		RD
OR 6315		RD		RE-P-16		RD
OR 6315		RD		RE-P-16		RD
OR 6315		RD		RE-P-18		RD
OR 6315		RD		RE-P-33		RD
OR 6315		RD		RE-P-33		RD
OR 6315		RD		RE-P-36		RD
OR 6315		RD		RE-P-37		RD
OR 6315		RD		RE-P-38		RD
OR 6315		RD		RE-P-43		RD
OR 6315		RD		RE-P-47		RD
OR 6315		RD		RE-P-47		RD
OR 6315		RD		RE-P-50		RD
OR 6315		RD		RE-P-50		RD
OR 6315		RD		RE-P-50		RD
OR 6315		RD		RE-P-50		RD
OR 6315		RD		RE-P-54		RD
OR 6315		RD		RE-P-54		RD
OR 6315		RD		RE-P-54		RD
OR 6315		RD		RE-P-55		RD
OR 6315		RD		RE-P-56		RD
OR 6315		RD		RE-P-58		RD
OR 6315		RD		RE-P-58		RD
OR 6315		RD		RE-P-58		RD
OR 6315		RD		RE-P-58		RD
OR 6315		RD		RE-P-58		RD
OR 6315		RD		RE-P-60		RD
OR 6315		RD		RE-P-61		RD
OR 6315		TEL		RE-P-61		RD
OR 6315		RD		RE-P-61		RD
OR 6315		TEL		RE-P-61		RD
OR 6315		RD		RE-P-61		RD
OR 6315		RD		RE-P-61		RD
OR 6315		RD		RE-P-61		RD
OR 6315		RD		RE-P-61		RD
OR 6315		RD		RE-P-62		RD
OR 6315		RD		RE-P-62		RD
OR 6315		RD		RE-P-63		RD

Serial Number	Name	Type		Serial Number	Name	Type
OR 6315		RD		RE-P-69		RD
OR 6443	US 395	RD		RE-P-71		RD
OR 6443	US 395	RD		RE-P-72		RD
OR 6443	US 395	RD		RE-P-78		RD
OR 6443	US 395	RD		RE-P-78		RD
OR 7248	BUTLER MKT RD	RD		RE-P-79		RD
OR 7265		RD		RE-P-79		RD
OR 7265		RD		RE-P-79		RD
OR 7265		RD		RE-P-80		RD
OR 7265		RD		RE-P-80		RD
OR 7265		RD		RE-P-80		RD
OR 7265		RD		RE-P-80		RD
OR 7265		RD		RE-P-81		RD
OR 7265		RD		RE-P-83		RD
OR 7265		RD		RE-P-84		RD
OR 7265		RD		RE-P-85		RD
OR 7265		RD		RE-P-85		RD
OR 7265		RD		RE-P-88		RD
OR 7265		RD		RE-P-89		RD
OR 7265		RD		RE-P-90		RD
OR 7265		RD		RE-P-90		RD
OR 7265		RD		RE-P-91		RD
OR 7265		RD		RE-P-92		RD
OR 7265		RD		RE-P-92		RD
OR 7265		RD		RE-P-92		RD
OR 7265		RD		RE-P-92		RD
OR 7265		RD		RE-P-97		RD
OR 7265		RD		RE-P-98		RD
OR 7265		RD		RE-P-99		RD
OR 7265		RD		TD 21901		RAILROAD
OR 7265		RD		TD 31609		HWY
OR 7265		RD		TD 32456	OR 402	RD
OR 7586		RD		TD 32456	OR 402	RD

Appendix M: Withdrawn Lands

"Legal Description" indicates sections within which withdrawn lands are located. Information on which portions of the cited sections are withdrawn is available at the Prineville District Office.

Within PSRs, sections noted with "*" contain land where the surface is "Open to Entry Subject Section 24 FPA."

Note: Table does not include other agency withdrawals within National Park boundaries, or lands within National Forest boundaries.

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
ORE 0 5286	PLO 3871	T.4N. R.22E. Sec. 26, 33;		Protection of Navigation and Power Development/John Day Lock and Dam Project	USACE	A	C
		T.3N. R.17E. Sec. 1;					C
		T.3N. R.18E. Sec. 18, 20, 22, 26, 30;					C
		T.3N. R.19E. Sec. 34, 35;					C
		T.3N. R.20E. Sec. 26, 28, 32;					C
		T.3N. R.21E. Sec. 2, 10;					C
		T.3N. R.22E. Sec. 4, 6;					C
		T.2N. R.18E. Sec. 10, 11, 12;					C
		T.2N. R.19E. Sec. 4, 6;					C
OR 59369	FO of 1/22/2004	T.3N. R.17E. Sec. 28;		Protection of Power Development/Power Project 12468	FERC	C	C
ORE 0 3141	PLO 1256	T.2N. R.16E. Sec. 7, 9, 10, 18;		Protection of Dam Project/ The Dalles Dam Project	COE	A	C
OR 19024	EO of 10/12/1932	T.3N. R.18E. Sec. 30*;		Protect Water Power and Reservoir Development Potential/ PSR 24	BLM	D	C
		T.1N. R.19E Sec. 4*;					C
		T.1N. R.20E Sec. 30*, 31*;					C
		T.1S. R.20E Sec 6, 7;					C
		T.3S. R.18E. Sec. 2, 11, 23, 24, 27, 35;					C
		T.4S. R.18E. Sec. 2, 3, 15, 22, 23, 25;					C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
		T.4S. R.19E. Sec. 29;					C
		T.5S. R.19E. Sec. 9, 21, 29;					C
		T.7S. R.19E. Sec. 5, 7, 8, 17-20;					C
		T.8S. R.19E. Sec. 3, 9, 21, 25, 26;					C
		T.8S. R.20E. Sec. 31;					C
		T.9S. R.19E. Sec. 12;					C
		T.9S. R.20E. Sec. 6, 30, 32;					C
		T.9S. R.21E. Sec. 28*, 29, 30, 31;					C
		T.9S. R.22E. Sec.13*, 14, 22, 23, 27,28, 32*;					C
		T.9S. R.23E. Sec. 1, 8*, 9*, 10*, 11, 12, 18;					C
		T.9S. R.25E. Sec. 24, 25;					
OR 19083	EO of 11/24/1916	T.2N. R.18E. Sec. 10*;		Protect Water Power and Reservoir Development Potential/ PSR 566	BLM	D	C
		T.2N. R.19E. Sec. 18, 19, 28, 30, 32;					C
		T.1N. R.19E. Sec. 2*;					C
		T.1N. R.20E. Sec. 30;					C
		T.1S. R.19E. Sec. 10*, 11*, 12*, 15, 17, 19, 21-23, 30, 31;					C
		T.2S. R.18E. Sec 1, 11-14, 23-26, 34, 35;					C
		T.3S. R.18E. Sec 1, 13, 14, 22, 23, 26, 27, 34, 35;					C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
		T.4S. R.18E. Sec 3, 10, 13, 14, 23-25;					C
		T.4S. R.19E. Sec 19, 29-32;					C
		T.5S. R.18E. Sec 25;					C
		T.5S. R.19E. Sec 5, 6, 8, 17, 20, 28-30;					C
		T.6S. R.19E. Sec 6, 7, 30;					C
		T.8S. R.19E. Sec 5;					C
		T.9S. R.23E. Sec 11;					C
OR 44721	PL 100-557	T.2N. R.18E. Sec 11-13;		Protection under Wild and Scenic Rivers Act / John Day WSR	BLM	Various	C
		T.2N. R.19E. Sec 18-20, 27-30, 32,33;					C
		T.1N. R.19E. Sec 2-4, 11, 14, 23-25, 36;					C
		T.1N. R.20E. Sec 5-7;					C
		T.1S. R.18E. Sec 36;					C
		T.1S. R.19E. Sec 3;					C
		T.2S. R.18E. Sec 1, 11-13, 23-26, 34, 35;					C
		T.2S. R.19E. Sec 5-7;					C
		T.3S. R.18E. Sec 2,3,11-15, 22-24,26,27,34,35;					C
		T.4S. R.18E. Sec 2, 3, 10, 11, 13-15, 22-25;					C
		T.4S. R.19E. Sec 19, 29-32;					C
		T.5S. R.18E. Sec 25, 36;					C
		T.5S. R.19E. Sec 5, 6, 8, 9, 16, 17, 20, 21, 29, 30;					C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
		T.6S. R.18E. Sec 1;					C
		T.6S. R.19E. Sec 6-8, 17-20, 29-32;					C
		T.7S. R.19E. Sec 5-8, 17-20, 29, 30, 32, 33;					C
		T.8S. R.19E. Sec 3-5, 9, 10, 15, 16, 22, 23, 25, 26, 35, 36;					C
		T.8S. R.20E. Sec 31;					C
		T.9S. R.19E. Sec 1, 11-14, 24, 25;					C
		T.9S. R.20E. Sec 1;					C
		T.9S. R.21E. Sec 27-36;					C
		T.9S. R.22E. Sec 13, 14, 21-24, 27-29, 31-33;					C
		T.9S. R.23E. Sec 17-19;					C
		T.10S. R.20E. Sec 1-4;					C
		T.10S. R.21E. Sec 1, 2, 6;					C
		T.10S. R.22E. Sec 5, 6;					C
							C
OR 44713	PL 100-557	T.1S. R.16E. Sec 4-6, 8, 9, 16, 17, 19-21, 29-32;		Protection under Wild and Scenic Rivers Act / Deschutes WSR	BLM	Various	C
		T.2S. R.16E. Sec 5-7, 18, 19;					C
OR 19046	EO of 7/2/1910	T.1S. R.19E. Sec 10, 31;		Protect Water Power and Reservoir Development Potential/ PSR 145	BLM	D	C
		T.1S. R.20E. Sec 6, 7;					C
		T.3S. R.18E. Sec 11, 15, 27;					C
		T.4S. R.18E. Sec 13;					C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
		T.5S. R.19E. Sec 20, 29;					C
		T.6 S. R.19E. Sec 7, 8, 17-20, 29;					C
		T.7S. R.19E. Sec 8, 17, 29;					C
		T.8S. R.19E. Sec 22;					C
		T.9S. R.19E. Sec 12;					C
		T.9S. R.20E. Sec 30, 32;					C
		T.9S. R.22E. Sec 23;					C
		T.9S. R.24E. Sec 6*;					C
Not Serialized	12/30/1982	T.2S. R.18E. Sec 1, 11-14, 20-29, 34, 35;		Protection of Wilderness Area Potential/Lower John Day	BLM		C
		T.2S. R.19E. Sec 6, 7, 18, 19;		Lower John Day			C
		T.3S. R.18E. Sec 1-3, 9-16, 20-30, 32-35;		Lower John Day			C
		T.4S. R.18E. Sec 1-4, 10-15, 22-27;		Lower John Day, Thirtymile			C
		T.4S. R.19E. Sec 19, 29-32;		Thirtymile			C
		T.5S. R.18E. Sec 24-26;		North Pole Ridge			C
		T.5S. R.19E. Sec 7, 8, 17, 19-21, 28-32;		North Pole Ridge			C
		T.8S. R.20E. Sec 6, 7, 18-21, 29;		Spring Basin			C
		T.13S. R.26E. Sec 25;		Aldrich Mountain			C
		T.13S. R.27E. Sec 19, 20, 28-32;		Aldrich Mountain			C
		T.14S. R.26E. Sec 1, 12, 13;		Aldrich Mountain			C
		T.14S. R.27E. Sec 5-8, 17, 19-21, 27-29, 34;		Aldrich Mountain			C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
		T.14S. R.31E. Sec 24, 25;		Sheep Gulch			C
		T.14S. R.32E. Sec 11;		Pine Creek			C
		T.14S. R.33E. Sec 10;		Indian Creek			C
OR 9041 C	EO of 4/17/1926	T.6 S. R.18E. Sec 25;		Protection of Public Water Resource/PWR 107	BLM	E	C
		T.12S. R.27E. Sec 1;					C
Not Serialized	EO of 4/17/1926	T.10S. R.20E. Sec 10, NW¼		Protection of Public Water Resource/PWR 107 Lower Coyote Canyon Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.10S. R.20E. Sec 16, SW¼ SW¼		Protection of Public Water Resource/PWR 107 Lockwood Cyn Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.10S. R.20E. Sec 21, SE¼SE¼		Protection of Public Water Resource/PWR 107 Pat's Cabin Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.10S. R.26E. Sec 30, NW¼NE¼		Protection of Public Water Resource/PWR 107 W-4 Spring # 2	BLM	Various	C
Not Serialized	EO of 4/17/1926	T. 10S. R.26E. Sec 30, SE¼SW¼		Protection of Public Water Resource/PWR 107 W-4 Spring # 3	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.10S. R.26E. Sec 31, NW¼NE¼		Protection of Public Water Resource/PWR 107 Branson Creek Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.10S. R.26E. Sec 7, SW¼NE¼		Protection of Public Water Resource/PWR 107 W-4 Spring #1	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.11S. R.21E. Sec 29, NE¼SW¼		Protection of Public Water Resource/PWR 107 Willow Springs	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.11S. R.21E. Sec 29, SE¼NW¼		Protection of Public Water Resource/PWR 107 Slickrock Spring	BLM	Various	C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
Not Serialized	EO of 4/17/1926	T.11S. R.21E. Sec 34, SW¼SE¼		Protection of Public Water Resource/PWR 107 Pee Wee Spring (RC)	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.11S. R.21E. Sec 35, SW¼SW¼		Protection of Public Water Resource/PWR 107 Broken Hip Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.11S. R.24E. Sec 30, SE¼NW¼		Protection of Public Water Resource/PWR 107 Fopiano Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.11S. R.25E. Sec 13, SE¼NW¼		Protection of Public Water Resource/PWR 107 Elmer Asher Spring # 1	BLM	Various	C
Not Serialized	EO of 4/17/1926	T11S,R26E,Sec 23 ,		Protection of Public Water Resource/PWR 107 Blue Basin Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.11S. R.26E. Sec 24, SW¼NW¼		Protection of Public Water Resource/PWR 107 Blue Basin Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.11S. R.26E. Sec 35,. NW¼SE¼		Protection of Public Water Resource/PWR 107 Maggie Spring	BLM Various	Various	C
Not Serialized	EO of 4/17/1926	T.11S. R 26E. Sec 35, SE¼SW¼		Protection of Public Water Resource/PWR 107 Corral Springs	BLM Various	Various	C
Not Serialized	EO of 4/17/1926	T.11S. R.27E. Sec 31, SE¼SE¼		Protection of Public Water Resource/PWR 107 Whisenhunt Spring	BLM Various	Various	C
Not Serialized	EO of 4/17/1926	T.12S. R.26E. Sec 08, SW¼SE¼		Protection of Public Water Resource/PWR 107 Basin Spring	BLM Various	Various	C
Not Serialized	EO of 4/17/1926	T.12S. R.26E. Sec 09, NW¼SW¼		Protection of Public Water Resource/PWR 107 Battle Ck Spring	BLM Various	Various	C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
Not Serialized	EO of 4/17/1926	T.12S. R.26E. Sec 21, NW¼SE¼		Protection of Public Water Resource/PWR 107 Mcnulty Basin Spring	BLM Various	Various	C
Not Serialized	EO of 4/17/1926	T.12S. R.26E. Sec 33, NE¼SE¼		Protection of Public Water Resource/PWR 107 Nash Reservoir Spring	BLM Various	Various	C
Not Serialized	EO of 4/17/1926	T. 12S. R.26E. Sec 34, SW¼SE¼		Protection of Public Water Resource/PWR 107 Bluebird Springs	BLM Various	Various	C
Not Serialized	EO of 4/17/1926	T.12S. R.26E. Sec 4, SE¼SW¼		Protection of Public Water Resource/PWR 107 Cactus Spring	BLM Various	Various	C
Not Serialized	EO of 4/17/1926	T.12S. R.26S. Sec 2, SW¼NW¼		Protection of Public Water Resource/PWR 107 Two Through Spring	BLM Various	Various	C
Not Serialized	EO of 4/17/1926	T.13S. R.15E. Sec 15, NW¼SW¼ and T.18S. R.15E. Sec 15, NW¼SW1/4		Protection of Public Water Resource/PWR 107 Cox Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.13S. R.26E. Sec 21, SE¼NW¼		Protection of Public Water Resource/PWR 107 Battle Creek Spring #2	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.13S. R.26E. Sec 22, NE¼SE¼		Protection of Public Water Resource/PWR 107 Munjar Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.13S. R.26E. Sec 26, SW¼NE¼		Protection of Public Water Resource/PWR 107 N. Munjar Srping	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.13S. R 26E. Sec 8, SW¼SE¼		Protection of Public Water Resource/PWR 107 Boundary Fence Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.13S. R.26E. Sec 9, SW¼NE¼		Protection of Public Water Resource/PWR 107 West Fork Spring (Battle Creek)	BLM	Various	C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
Not Serialized	EO of 4/17/1926	T.13S. R.26E. Sec 9, SW¼SW¼		Protection of Public Water Resource/PWR 107 Battle Creek Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.13S. R.26E. Sec 9, SW¼SW¼		Protection of Public Water Resource/PWR 107 Battle Creek Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.13S. R.27E. Sec 20, SW¼NE¼		Protection of Public Water Resource/PWR 107 Gray Gulch Spring #3	BLM	Various	C
Not Serialized	EO of 4/17/1926	T.13S. R.27E. Sec 31, SW¼NE¼		Protection of Public Water Resource/PWR 107 Oliver Creek Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T14S, R26E, Sec 35, NW¼SE1/4		Protection of Public Water Resource/PWR 107 Rockpile Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T14S, R27E, Sec 17, NE¼NW¼		Protection of Public Water Resource/PWR 107 Dry JackAss Butte Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T14S, R27E, Sec 20 ,NE¼SW¼		Protection of Public Water Resource/PWR 107 JackAss Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T14S, R27E, Sec 28, NW¼NW¼		Protection of Public Water Resource/PWR 107 Big Pine Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T14S, R27E, Sec 30, SW¼SW¼		Protection of Public Water Resource/PWR 107 Cow Gulch Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T14S, R27E, Sec 33, SE¼SW¼		Protection of Public Water Resource/PWR 107 Bull Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T14S, R31E, Sec 22, NW¼NW¼		Protection of Public Water Resource/PWR 107 Miller Mt. Spring	BLM	Various	C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
Not Serialized	EO of 4/17/1926	T15S, R26E, Sec 12, NE¼SW¼		Protection of Public Water Resource/PWR 107 Doghouse Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T15S, R26E, Sec 23, NE¼NW¼		Protection of Public Water Resource/PWR 107 Hairpin Curve Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T15S, R26E, Sec 23, SW¼SW¼		Protection of Public Water Resource/PWR 107 North Cougar Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T15S, R26E, Sec 29, NE¼NW¼		Protection of Public Water Resource/PWR 107 Magic Latern Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T16S, R26E, Sec 16		Protection of Public Water Resource/PWR 107 Carcajou Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T16S, R27E, Sec 25, SW¼NW¼		Protection of Public Water Resource/PWR 107 French Butte Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T16S, R27E, Sec 28, NW¼SW¼		Protection of Public Water Resource/PWR 107 Little Frazier Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T16S, R27E, Sec 28, NW¼SW¼		Protection of Public Water Resource/PWR 107 Junction Ck Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T16S, R27E, Sec 30, NE¼SE¼ and T16S, R27E, Sec 29, S½NW¼		Protection of Public Water Resource/PWR 107 Ellingson Mill Administrative Site	BLM	Various	C
Not Serialized	EO of 4/17/1926	T16S, R27E, Sec 30, SW¼NW¼		Protection of Public Water Resource/PWR 107 No Where Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T17S, R27E, Sec 15, NE¼NE¼		Protection of Public Water Resource/PWR 107 Phillips Spring #1	BLM	Various	C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
Not Serialized	EO of 4/17/1926	T17S, R27E, Sec 2, NE¼SW¼		Protection of Public Water Resource/PWR 107 Phillips Spring #2	BLM	Various	C
Not Serialized	EO of 4/17/1926	T17S, R27E,S ec 5, NE¼SW¼		Protection of Public Water Resource/PWR 107 Pine Creek Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T17S, R28E, Sec 18, NE¼NW¼		Protection of Public Water Resource/PWR 107 Wildcat Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T17S, R28E,S ec 18, NE¼NW¼		Protection of Public Water Resource/PWR 107 St. Clair - Wildcat Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T17S, R28E, Sec 19, NE¼SE¼		Protection of Public Water Resource/PWR 107 Pasture Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T17S, R28E, Sec 19, NE¼SW¼		Protection of Public Water Resource/PWR 107 St. Clair - Reservoir Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T17S, R28E, Sec 20, NE¼NW¼		Protection of Public Water Resource/PWR 107 Poison Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T17S, R28E, Sec 20, SE¼NW¼		Protection of Public Water Resource/PWR 107 St. Clair-Tributary Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T18S, R27E, Sec 3, NE¼SW¼		Protection of Public Water Resource/PWR 107 Sheep Creek Butte Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T18S, R28E, Sec 06, NW¼SW¼		Protection of Public Water Resource/PWR 107 Nothalf - Flat Ck Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T18S, R28E, Sec 06, SE¼NE¼		Protection of Public Water Resource/PWR 107 Nothalf - Buck Ck Spring	BLM	Various	C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
Not Serialized	EO of 4/17/1926	T18S, R28E, Sec 08, NW¼NE¼		Protection of Public Water Resource/PWR 107 Blackhorse Draw Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T18S, R28E, Sec 8, NW¼NE¼		Protection of Public Water Resource/PWR 107 Notatft Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T1S, R19, Sec 10, NW¼NW¼		Protection of Public Water Resource/PWR 107 High Spring # 3	BLM	Various	C
Not Serialized	EO of 4/17/1926	T1S,R19, Sec 11, NW¼SW¼		Protection of Public Water Resource/PWR 107 High Spring # 2	BLM	Various	C
Not Serialized	EO of 4/17/1926	T1S, R19, Sec 11, SW¼SE¼		Protection of Public Water Resource/PWR 107 High Spring # 5	BLM	Various	C
Not Serialized	EO of 4/17/1926	T2S, R18E, Sec 27, SW¼SW¼		Protection of Public Water Resource/PWR 107 Eakin & Strewart Spring 3	BLM	Various	C
Not Serialized	EO of 4/17/1926	T2S, R18E, Sec 27, SW¼SW¼		Protection of Public Water Resource/PWR 107 Eakin & Strewart Spring 2	BLM	Various	C
Not Serialized	EO of 4/17/1926	T2S, R20E, Sec 11, NW¼SW¼		Protection of Public Water Resource/PWR 107 Barnell Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T2S, R20E, Sec 3		Protection of Public Water Resource/PWR 107 Hay Ck Spring # 1	BLM	Various	C
Not Serialized	EO of 4/17/1926	T2S, R20E, Sec 9		Protection of Public Water Resource/PWR 107 Hay Ck Spring # 2	BLM	Various	C
Not Serialized	EO of 4/17/1926	T2S, R20E, Sec 9		Protection of Public Water Resource/PWR 107 Hay Ck Spring # 3	BLM	Various	C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
Not Serialized	EO of 4/17/1926	T2S, R21E, Sec 21, NE¼NE¼		Protection of Public Water Resource/PWR 107 Eakin and Strewart Spring 1	BLM	Various	C
Not Serialized	EO of 4/17/1926	T3S, R15E, Sec 10, SW¼SW¼		Protection of Public Water Resource/PWR 107 Gert Canyon Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T8S, R19E, Sec 03, SE¼NE¼		Protection of Public Water Resource/PWR 107 Sidehill Sp and Pipeline	BLM	Various	C
Not Serialized	EO of 4/17/1926	T8S, R20E, Sec 24, SW¼NW¼		Protection of Public Water Resource/PWR 107 Line Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T9S, R20E, Sec 26 , NW¼NW¼		Protection of Public Water Resource/PWR 107 Tom Stephen Spring # 1	BLM	Various	C
Not Serialized	EO of 4/17/1926	T9S, R20E, Sec 26, SW¼SW¼		Protection of Public Water Resource/PWR 107 Tom Stephen Spring # 2	BLM	Various	C
Not Serialized	EO of 4/17/1926	T9S, R21E, Sec 29, SE¼SW¼		Protection of Public Water Resource/PWR 107 C.O. Warren Spring	BLM	Various	C
Not Serialized	EO of 4/17/1926	T9S, R25E, Sec 8, NW¼SW¼		Protection of Public Water Resource/PWR 107 Fischer Spring	BLM	Various	C
OR 19027	EO of 7/2/1910	T.7S. R.28E. Sec 33-35;		Protect Water Power and Reservoir Development Potential/ PSR 61	BLM	D	C
		T.8S. R.28E. Sec 4, 5, 7-9, 17, 18, 19*, 20*, 30*;					C
		T.9S. R.26E. Sec 14*, 19, 20*, 21, 30;					C
		T.9S. R.27E. Sec 2;					C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
OR 19026	EO of 7/2/1910	T.8S. R.29E. Sec 10*, 11*, 12*;		Protect Water Power and Reservoir Development Potential/ PSR 60	BLM	D	C
		T.8S. R.30E. Sec 7*, 17, 24*, 25*;					C
		T.8S. R.31E. Sec 30*, 32*;					C
		T.9S. R.31E. Sec 4*, 5*;					C
OR 19031	EO of 7/2/1910	T.9S. R.26E. Sec 31;		Protect Water Power and Reservoir Development Potential/ PSR 65	BLM	D	C
		T.10S. R.26E. Sec 7*, 18*;					C
		T.12S. R.26E. Sec 20*;					C
Not Serialized	2/21/1996	T.10S. R.20E. Sec 4, 9, 10, 14-17, 19-23, 28-35;		Protection of Wilderness Area Potential/Pat's Cabin Wilderness Study Area	BLM		C
		T.11S. R.20E. Sec 4;					C
Not Serialized	2/21/1996	T.10S. R.20E. Sec 12, 12, 24, 25;		Protection of Wilderness Area Potential/Sutton Mountain Wilderness Study Area	BLM		C
		T.10S. R.21E. Sec 2-12, 14-23, 25-36;					C
		T.10S. R.22E. Sec 30-32;					C
		T.11S. R.21E. Sec 1-5, 9-16, 21-23;					C
		T.11S. R.22E. Sec 5-8, 18;					C
							C
ORE 010418	PLO 3076	T.11S. R.25E. Sec 3		Protection of Air Navigation Site/John Day ANS	FAA	B	C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
OR 46602	SO of 9/28/1928	T.12S. R.25E. Sec 1, 2;		Protection of lands for State, RP&P Selection/Recreational Withdrawal #15	BLM/NPS	Closed to Public Land Laws except RP&P disposal	C
		T.11S. R.26E. Sec 5, 8, 18, 20;					C
OR 44748	PL 100-557	T.13S. R.26E. Sec 24-26;		Protection under Wild AND Scenic Rivers Act/ S Fork John Day WSR	BLM	Various	C
		T.15S. R.26E. Sec 1, 12-14, 24,25,36;					C
		T.15S. R.27E. Sec 19, 30, 31;					C
		T.16S. R.26E. Sec 1;					C
		T.16S. R.27E. Sec 7, 18-20, 29, 32, 33;					C
		T.17S. R.27E. Sec 4, 9, 10, 15, 22-25;					C
		T.17S. R.28E. Sec 28-30, 32-34;					C
		T.18S. R.28E. Sec 3, 4, 10, 11, 13-15, 24;					C
OR 19030	EO of 7/2/1910	T.14S. R.26E. Sec 23*, 26*, 35*;		Protect Water Power & Reservoir Development Potential/ PSR 64	BLM	D	C
OR 44758		T.17S. R.36E. Sec 21, 22, 27, 28, 33, 34;		Protection under Wild & Scenic Rivers Act /N Fork Malheur Study River	BLM		C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
Not Serialized		Rock Creek (RM 23) T1N, R19E, Sec 14, E½		Recreation Sites to be withdrawn form Mineral Entry (2001 John Day Wild and Scenic River Plan Record of Decision Appendix J)	BLM		C
		Cottonwood Bridge (RM40) T1S, R19E, Sec 17, SW¼SW¼, SW¼, SE¼					C
		Butte Creek (RM97) T6S, R19E, Sec 8, SW¼SW¼, Sec 17 NW¼NW¼					C
		Clarno (RM 106-109) T7S, R19E Sec 18 S½ SW¼, SW¼SE¼ Sec 19 Sec 20 W½ Sec 29 W½, SW¼SE¼ Sec 30 E½ Sec 32 N½, N½SW¼					C
		Clarno East (RM 112) T8S, R19E Sec 3 NE¼SW¼					C
		Burn Ranch (RM 132-133) T9S, R20E Sec 32 SW¼NW¼, S½					C
		Priest Hole (RM 137) T9S, R20E Sec 36 S½					C
		Service Creek (RM 157) T9S, R23E Sec 17 NW¼ Sec 18 E½NE¼					C
		Muleshoe (RM 159) T9S, R23E Sec 9 SW½NE¼					C

Serial Number	Order Number/Date	Legal Description	Acres	Purpose/Name	Managing Agency	Segregative Effect	Recommendation (C/R)
		Wooden Bridge (RM 162) T9S, R23E Sec 12 N½NW¼					C
		Shady Grove (RM178) T9S, R25E Sec 9 N½NE¼					C
		Lone Pine (North Fork RM2) T9S, R26E Sec 20 W½NE¼, NW¼					C
		Lone Pine (North Fork RM 2) T9S, R26E Sec 20 W½NE¼, NW¼					C
		Big Bend (North Fork RM 3) T9S, R26E					C
		Monument (North Fork RM 16) T9S, R27E Sec 1 SW¼, NW¼SE¼					C
		Ellingson Mill (South Fork RM 32) T16S, R27E Sec 29 W½					C

Acronyms:

PLO: Public Land Order
PSR: Power Site Reserve
PSC: Power Site Classification
R&PP: Recreation and Public Purposes
WPD: Water Power Designation
FPC: Federal Power Commission

DO: Director Order
EO: Executive Order
SO: Secretarial Order
BO: Bureau Order
FO: FERC Order
PL: Public Law

Segregative Effect:

A: Withdrawn from operation of the general land laws, the Mining law, and the Mineral Leasing Act
B: Withdrawn from operations of the General Land and Mining Laws
C: Withdrawn from operation of the General Land Law
D: Withdrawn from operation of the General Land Law, open to mining subject to Public Law 359
E: Withdrawn from operation of the General Land Law, withdrawn from mining except metalliferous

Recommendation:

Continue-C Revoke-R

Appendix N: Implementation and Monitoring

Introduction

An implementation and monitoring schedule helps to focus priorities in order to leverage multiple resources, identifies key partnerships where mutual interests can be met with minimum costs, and provides specific interests an opportunity to focus resources on areas of specialized interest.

Currently, without public comment on alternatives and the selection of a Proposed Action, creating an implementation and monitoring plan would be premature. The following is provided to identify the process, necessary elements, timeline, and broad scale questions that will guide the development of an implementation and monitoring plan. The implementation and monitoring plan will be developed with stakeholder involvement shortly after the Record of Decision and Final Resource Management Plan are published.

Collaborative Approach and Regional Framework

The Draft John Day Basin Resource Management Plan was developed with input from diverse public outreaches, cooperators, and the John Day/Snake Resource Advisory Council. That approach will also be applied to develop an implementation and monitoring schedule for the objectives and anticipated outcomes of the John Day Basin Resource Management Plan.

Implementation and Monitoring Schedule

Successfully implementing the long-term vision of the John Day Basin Resource Management Plan will be supported by a strategic implementation and monitoring framework that includes descriptions of the following:

1. task & resource estimates to get to on-the ground implementation
2. priority areas for resource focus (See Objectives: S3, V4 and 5, FU2, AQ3, W4, and AC5 for resource specific prioritization criteria)
    a. integration of basin-wide interest
        i. Watershed councils
        ii. Community Wildfire Protection Plans
        iii. Malheur, Ochoco, and Umatilla National Forests
        iv. ODF&W conservation opportunity areas
    b. relative costs/benefits of choices
    c. resource/community benefits/needs
    d. partnership opportunities
    e. funding strategies
3. partnerships
    a. stewardship opportunities
    b. opportunities for administration or cost sharing
    c. volunteers
    d. complementary basin or regional efforts
        i. Bonneville Power Administration - John Day Sub-basin draft plan - 2005
        ii. The Nature Conservancy – Ecoregional Assessment
4. effective measures for establishing periodic "course corrections"
    a. adaptive management (See Objectives AC5, R8, and R9. for identified adaptive management criteria)
    b. plan maintenance

c. regional and basin-wide monitoring frameworks
d. appropriate data collection and analysis - MONITORING
RMP monitoring differs from activity or program specific monitoring in that it looks at progress on a landscape basis and focuses on trends as they relate to the achievement of objectives that designed to move conditions toward Desired Future Condition (DFC).

i. implementation monitoring – would record what, when, where, and how the plan has been followed, including legal requirements and agency policies. Implementation monitoring would occur at one-year intervals and would provide a basis for annual budgeting.

ii. effectiveness monitoring – were the implemented projects/plan guidance effective at moving conditions towards the objectives and long term vision of the RMP.

iii. plan evaluation – has there been a significant change in the science, issues, or knowledge gained from effectiveness monitoring that would call for a change in RMP direction.

Conditions that might warrant a change in the RMP include:

- New information or circumstances that provide for interpretations not known or understood when the RMP was completed that could significantly affect ongoing actions.
- RMP decisions that are no longer valid based on new information or changed circumstances.
- Implementation decisions that are no longer valid based on new information or changed circumstances.
- Effects of proposed or ongoing actions that are substantially different than those projected in the Environmental Impact Statement (EIS).
- Inconsistencies that arise between RMP actions and other resource-related plans.

The understanding gained through a comprehensive review of all the monitoring data is critical to managing sustainable, healthy, and productive habitats. Evaluation and assessment would occur at five-year intervals. Conditions that indicate conditions that reflect a movement away from DFC may indicate a need to change or adjust management. Results from program specific monitoring could provide additional indicators for change.

Minor changes, refinements, or clarifications in the plan are maintenance actions that incorporate data from monitoring. Plan maintenance actions would not expand the scope of resource uses or restrictions or change the terms, conditions, or decisions of the approved John Day Basin RMP/EIS. Maintenance actions do not require formal public involvement, Tribal consultations, or interagency coordination. Major changes to the plan, however, would require a plan amendment, formal public involvement, interagency coordination, and Tribal consultations, and NEPA analysis.

MONITORING QUESTIONS

To better guide development of a strategic monitoring plan the ID team has developed broad scale monitoring questions. Public feedback on these monitoring questions and input from stakeholders will be use to develop a specific monitoring plan. These questions are intended to provide a landscape scale picture of trend as it relates to Desired Future Conditions and the effectiveness of plan direction at addressing issues identified in the Purpose and Need.

Implementation Monitoring:

- Are actions and projects being implemented in the locations, amounts, and manner specified in the RMP?
- Are BMPs being applied?
- Are projects being implemented in accord with resource specific and implementation plan priorities?

Effectiveness Monitoring:

- Are BLM actions moving at-risk riparian/aquatic areas toward PFC?
- Are BLM actions moving 5% of the areas at PFC toward desired potential conditions?
- Are BLM actions moving vegetative conditions toward ARV?
- Are BLM actions maintaining or reducing the extent of noxious weeds and invasive annuals?
- Are BLM actions developing conditions where fire can be managed in a safe and ecologically resilient manner?
- Are OHV and Interim/Designated route designations providing adequate access to and opportunities for use of public lands?
- Are OHV and Interim/Designated route designations meeting resource objectives such as wildlife security, limiting erosion, providing areas of non-motorized recreation, etc.?
- Are BLM actions and designations on the North Fork acquired lands providing recreational opportunities while protecting unique fish and wildlife resources?

The following resource specific monitoring will be used to help answer plan level monitoring needs:

Air Quality

There is an air quality monitoring network developed for Oregon that will be used to determine whether the national ambient air quality standards are met; monitoring stations are located in La Grande, Baker City, Burns, and John Day. This monitoring network will continue be used to determine background pollution levels which can help measure emissions increases during fire events.

Vegetation

Treatment monitoring will be done consistent with the Central Oregon Fire Management Services Fuels Monitoring Strategy or its successor.

Changes in ARV (Geographic distribution, magnitude, and cause).

Fire and Fuels

Fuels treatment monitoring will be done consistent with the Central Oregon Fire Management Services Fuels Monitoring Strategy or its successor.

Changes in FRCC (Geographic distribution, magnitude, cause)

Number of fires where the fire management objective was in whole or part to achieve resource benefit.

Aquatic Resources (ACS Monitoring and Inventory)

Inventory

During field assessments aquatic or other resources, update riparian photo points and PFC inventories of lentic areas, all fish bearing stream, and on perennial, perennial interrupted and intermittent streams greater than ¼ mile or ½ acre. Update inventory during assessments if previous inventories indicate non attainment, are older than 3 years, or both.

Monitoring

- Continue to participate in PACFISH INFISH Effectiveness Monitoring (PIBO), if it is continued at the regional scale.
- Monitor the most limiting factor on PFC assessments where streams and lentic areas are not at PFC (approximately 25% of streams). PFC assessments (USDI 1988 and 1999) and activity level planning shall guide the identification of specific riparian attributes of vegetation, hydrology/geomorphology and erosion/deposition to be monitored. Selection of monitoring technique will be unique to the topic, site, and recent science but is likely to include photo monitoring. Monitoring frequency must be accomplished at least every 10 years in order to be meaningful for the next land use plan.
- At the watershed scale (5th field HUC; up to 250,000 acres), evaluate the percentage of routes passing 100 year flood with a natural geometry, slope, & bed stability and with safe passage for aquatic organisms. Are active and passive restoration actions allowing an upward trend toward desired conditions for streambank stability, water quality and width to depth ratios?
- Evaluate improvements in vegetation (streambank stability) and channel width to depth ratios on major river (Wild and Scenic Segments) and the acquired land on the North Fork John Day.
- Are active and passive restoration actions allowing an upward trend toward desired conditions for pools?
- Survey pools on streams with essential fish habitat for rearing where segments of BLM are longer than ¼ mile BLM ownership. Repeat every 10 years.
- Develop and continue to support BLM and joint efforts to monitor any water quality parameter of interest to a specific TMDL.

Wildlife

Monitor the number of adult long-billed curlew on the Horn Butte reproductive area yearly between March and April.

Wilderness Study Areas

Within available means, assure a level of monitoring and surveillance of each WSA adequate to prevent, detect, and mitigate unauthorized uses and facilities.

- Establish partnerships with user groups who are willing to assist the BLM with WSA monitoring on a volunteer basis.

Areas of Critical Environmental Concern

- Monitor ecological conditions and uses within ACECs to ensure that management actions and resource uses within all existing and proposed ACECs are compatible with the values and resources for which they were established or proposed.
- Establish long-term ecological monitoring for Black Canyon ACEC.

Recreation

- Use Limits of Acceptable Change identify areas where dispersed recreation is contributing to non-attainment of RMP resource objectives or recreation experience, or both. Actions to protect resources, such as campsite hardening, rehabilitation or closure, may be taken at any time, if necessary.
- Monitor the 4,488 acre Rudio Plateau area annually to determine if ecological and social thresholds for Open OHV use have been exceeded. The Rudio Plateau area would remain seasonally Open unless one or more of the following triggers are exceeded, at which point the area would be Closed to off-route travel and limited to designated routes. The triggers for closure are:
  - When unmitigated motorized use for > 1 year will cause sensitive species to become listed as threatened or endangered, currently listed threatened or endangered species to be "taken", or streams to become listed as 303d listed for not providing water quality for beneficial uses,
  - When BLM or its partners cannot afford to protect public safety or resource objectives, or resolve most conflicts with users or adjacent lands (see BMPs),
  - When detrimental soil disturbance exceeds 15 percent of the Rudio OHV area, or
  - If BLM or its partners are no longer monitoring motorized use, special status species, soil disturbance or other relevant resource values.
- Monitor visitor use on the 4,488 acre Rudio Plateau to determine if changes are needed in transportation or other activity planning.

Paleontological Resources

- Periodically monitor for unauthorized disturbances to and locality condition of paleontological resources.
- Monitor sites and conduct law enforcement patrols to discourage vandalism and check site conditions.
- Conduct reactive inventory, recording and evaluation on a project-specific level.
- Periodically monitor for ARPA violations and site condition.
- Conduct intensive and complete inventory in areas of high probability and/or potential high use not previously inventoried and which are not necessarily associated with specific projects.
- Conduct limited site testing/salvage excavation where appropriate.

Appendix O: Priority Species Assessment

ISSSSP: State Director's Special Status Species List for the Oregon/Washington Bureau of Land Management (BLM) for Sensitive species lists.

CSLB -Focal species: Partners in Flight Conservation Strategy for Landbirds Focal Species:

The strategy for achieving functioning ecosystems for landbirds is described through the habitat requirements of "focal species" that are highly associated with important attributes or conditions within each habitat type. The rationale for using focal species is to draw immediate attention to habitat attributes most in need of conservation or most important in a functioning ecosystem. By managing for a group of species representative of important components in a functioning ecosystem, many other species and elements of biodiversity also will be conserved.

(LI) Locally Important Species: Designated for interest shown by the state and public.

Grassland Priority Species

Priority Species	Species Status	Key Habitat Features
Washington ground squirrel	ISSSSP	Areas of high grass cover, on deep soils with low clay content.
Grasshopper sparrow	CSLB -Focal species and ISSSSP	Large patches of grass cover with few to no shrubs.
Bobolink	ISSSSP	Tall grass areas, flooded meadows, and prairies.
Upland sandpiper	CSLB -Focal species and ISSSSP	Large areas of short grass interspersed or adjacent to taller grasses.
Mule deer	LI	Coniferous forests, desert shrub and grasslands with shrubs.
Antelope	LI	Grasslands with mix of forbs and shrubs.

Shrubland Priority Species

Priority Species	Species Status	Key Habitat Features
Greater sage grouse	CSLB -Focal species and ISSSSP	Big sagebrush dominated habitats with diverse understories of grasses and forbs.
Loggerhead shrike	CSLB -Focal species	Shrubs or small junipers for nesting.
Sage sparrow	CSLB -Focal species	Large patches of big sagebrush.
Pygmy rabbit	ISSSSP	Burrow in tall, dense, mature sagebrush plants; need deep, friable soils for burrows.
Brewer's sparrow	CSLB -Focal species	Areas of sagebrush in desert, and shrubland/ chaparral.
Sage thrasher	CSLB -Focal species	Big sagebrush plains, primarily in arid or semi-arid situations.
Lark sparrow	CSLB -Focal species	Ecotonal edges in herbaceous, shrub, and tree habitats.
Burrowing owl	CSLB -Focal species	Grass-(or shrub) dominated habitats; associated with burrowing animals
Antelope	LI	Grasslands with mix of forbs and shrubs
Mule deer	LI	Coniferous forests, desert shrub and grasslands with shrubs.
Elk	LI	Alpine, Conifer, Hardwood and Mixed Woodlands and Forests, Grassland/herbaceous, Savanna and Shrublands.

Juniper Steppe Priority Species

Priority Species	Species Status	Key Habitat Features
Ferruginous Hawk	CSLB -Focal species	Scattered, mature juniper trees
Antelope	LI	Grasslands with mix of forbs and shrubs
Mule deer	LI	Coniferous forests, desert shrub, and grasslands with shrubs.
Elk	LI	Alpine, Conifer, Hardwood and Mixed Woodlands and Forests, Grasslandherbaceous, Savanna and Shrublands.

Forest Priority Species

Priority Species	Species Status	Key Habitat Features
Lewis' woodpecker	ISSSSP and CSLB -Focal species	Patches of burned old trees usually in low elevation forests, including pine and cottonwood riparian.
Chipping sparrow	CSLB -Focal species	Open forest with well-developed under story in ponderosa pine, Douglas-fir, and grand-fir.
White-headed woodpecker	ISSSSP & CSLB -Focal species	Large pine trees in pure pine and mixed conifer stands (Dry Forest types)
Flammulated owl	CSLB -Focal species	Large pine trees in old forest with grassy openings and dense thickets (Dry forest types).
Townsend's big-eared bat	ISSSSP	Uses caves and bark of large trees in forested regions, areas with a mosaic of woodland, grassland, and/or shrubland.
Mule deer	LI	Coniferous forests, desert shrub and grasslands with shrubs.
Elk	LI	Alpine, Conifer, Hardwood and Mixed Woodlands and Forests, Grassland/herbaceous, Savanna and Shrublands.

Riparian Priority Species

Priority Species	Species Status	Key Habitat Features
Bald eagle	ISSSSP	Large diameter trees along rivers and lakes. Forages for fish or waterfowl on water.
Peregrine falcon	ISSSSP	Riparian areas from seacoasts, to mountainous open forests where there are suitable nesting cliffs.
Yellow-billed cuckoo	CSLB -Focal species	Large patches of cottonwood and willow riparian woodlands.
Upland sandpiper	CSLB -Focal species and ISSSSP	Large areas of short grass interspersed or adjacent to taller grasses.
Tricolored blackbird	ISSSSP	Fresh-water marshes of cattails, tules, bulrushes and sedges
Bobolink	ISSSSP	Tall grass areas, flooded meadows, and prairies.
Black swift	ISSSSP	Waterfalls and wet cliffs near forests and open areas.
Lewis' woodpecker	ISSSSP and CSLB -Focal species	Patches of burned old trees usually in low elevation forests, including pine and cottonwood riparian.
Bufflehead	ISSSSP	Riparian vegetation along marshes, rivers, and lakes.
Silver-Bordered Fritillary	ISSSSP	Wet areas in meadows, bogs, marshes, and swamps.
Meadow Fritillary	ISSSSP	Wet areas in marshes, meadows, and aspen groves.

Cliff and Canyon Priority Species

Priority Species	Species Status	Key Habitat Features
Prairie falcons	CSLB -Focal species	Primarily open situations, especially in mountainous areas, steppe, plains or prairies adjacent to potential cliff nest sites
Fringed myotis	ISSSSP	Caves, cliffs and mines in deserts, grasslands, woodlands and forests.
Spotted bats	ISSSSP	Cliffs and caves from desert to montane coniferous stands.
Pallid bat	ISSSSP	Arid deserts and grasslands, often near rocky outcrops and water
Townsends' big-eared bat	ISSSSP	Uses caves and bark of large trees in forested regions , areas with a mosaic of woodland, grassland, and/or shrubland
Bighorn sheep	LI	Cliffs, rock rims, rock outcroppings, and bluffs with sparse cover of trees or shrubs

Appendix P: Common and Scientific Names

Below is a table of the common names of plants as given by the USDA and their scientific names. Some common names are known by another name, as indicated in the parenthesis.

Plants

Common Name	Scientific Name	Code
Alkali sacaton	*Sporobolus airoides*	SPAI
American speedwell	*Veronica americana*	VEAM2
antelope bitterbrush	*Purshia tridentata*	PUTR (2)
arrowleaf balsamroot	*Balsamorhiza sagittata*	BASA
arrowleaf thelypody	*Thelypodium eucosmum*	THEU
aster	*Aster* sp.	ASTER
Baltic rush	*Juncus balticus*	JUBAB2
basin big sagebrush	*Artemisia tridentata* ssp. *tridentata*	ARTR (2)
basin wildrye (Great Basin wild rye)	*Leymus cinereus*	LECI4
bigseed biscuitroot	*Lomatium macrocarpum*	LOMA
black cottonwood	*Populus balsamifera* ssp. *trichocarpa*	POPUL
black currant	*Ribes hudsonianum*	RIBES
blue elder (blue elderberry)	*Sambucus nigra* ssp. *caerulea*	SANIC5
bluebells	*Mertensia sp.*	MERTE
bluebunch wheatgrass	*Agropyron spicatum*	AGSP
bluebunch wheatgrass	*Pseudoroegneria spicata*	PSSP (6, S)
bride's bonnet (queen's cup beadlily)	*Clintonia uniflora*	CLUN2
broadleaf cattail	*Typha latifolia*	TYLA
chairmaker's bulrush (three square bulrush)	*Schoenoplectus americanus*	SCAM6
cheatgrass	*Bromus tectorum* var. *tectorum*	BRTE
choke cherry	*Prunus virginiana*	PRVI
clasping pepperweed	*Lepidium perfoliatum*	LEPE2
cocklebur	*Xanthium* sp.	XANTH2
Columbia monkshood	*Aconitum columbianum*	ACCO4
common snowberry	*Symphoricarpos albus*	SYAL
common spikerush	*Eleocharis palustris*	ELPA3
cryptantha	*Cryptantha* sp.	CRYP
Dalmatian toadflax	*Linaria dalmatica*	LIDA
dawn redwood	*Metasequoia glyptostroboides*	MEGL8
diffuse knapweed	*Centaurea diffusa*	CEDI3
Douglas-fir	*Pseudotsuga menziesii*	PSME
dwarf suncup (dwarf evening-primrose)	*Camissonia pygmaea*	CAPY5

Plants

Common Name	Scientific Name	Code
elk sedge	*Carex garberi*	CAGA3
Englemann spruce	*Picea engelmannii*	PIEN
fiddleneck	*Amsinckia* sp.	AMSIN
field horsetail	*Equisetum arvense*	EQAR
fireweed	*Chamerion angustifolium*	CHAN9
fleabane	*Erigeron* sp.	ERIGE2
fringed willowherb (hairy willowherb)	*Epilobium ciliatum*	EPCI
Geyer's sedge	*Carex geyeri*	CAGE2
grand fir	*Abies grandis*	ABGR
gray alder (mountain alder)	*Alnus incana*	ALNUS
gray rabbitbrush	*Ericameria nauseosa*	ERNA1
greasewood	*Sarcobatus vermiculatus*	SAVE4
greenleaf fescue (green fescue)	*Festuca viridula*	FEVI
grouse whortleberry (grouse huckleberry)	*Vaccinium scoparium*	VASC
hardheads (Russian knapweed)	*Acroptilon repens*	ACRE3
heartleaf arnica	*Arnica cordifolia*	ARCO9
Hood's sedge	*Carex hoodii*	CAHO5
Indian ricegrass	*Achnatherum hymenoides*	ACHY
Jacob's-ladder	*Polemonium pulcherrimum*	POPU3
largeleaf sandwort (bigleaf sandwort)	*Moehringia macrophylla*	MOMA3
leafy spurge	*Euphorbia esula*	EUES
Lewis' mockorange	*Philadelphus lewisii*	PHLE4
little prince's pine (prince's pine)	*Chimaphila menziesii*	CHME
little sagebrush (low sagebrush)	*Artemisia arbuscula*	ARAR8
lodgepole pine	*Pinus contorta*	PICO
lupine	*Lupinus* sp.	LUPIN
mallow-leaf ninebark	*Physocarpus malvaceus*	PHMA5
medusahead (medusahead rye)	*Taeniatherum caput-medusae*	TACA8
mountain big sagebrush	*Artemisia tridentata* ssp. *vaseyana*	ARTRV
mountain snowberry	*Symphoricarpos oreophilus*	SYOR (2)
mountain-mahogany	*Cercocarpus ledifolius*	CELE3
naked sedge (torrent sedge)	*Carex nudata*	CANU5
narrowleaf mock goldenweed	*Stenotus stenophyllus*	STST5
Nebraska sedge	*Carex nebrascensis*	CANE2
needle-and-thread	*Hesperostipa comata*	HECO26
netleaf hackberry	*Celtis laevigata* var. *reticulata*	CELAR
oceanspray	*Holodiscus dumosus*	HODI
Pacific ninebark	*Physocarpus capitatus*	PHCA11

Plants

Common Name	Scientific Name	Code
Parry's rush	*Juncus parryi*	JUPA
peachleaf willow	*Salix amygdaloides*	SAAM2
pine	*Pinus* sp.	PINUS
pinegrass	*Calamagrostis rubescens*	CARU
poison hemlock	*Conium maculatum*	COMA2
ponderosa pine	*Pinus ponderosa*	PIPO
prickly currant	*Ribes lacustre*	RILA
prickly sandwort	*Arenaria aculeata*	ARAC2
puncturevine	*Tribulus terrestris*	TRTE
purple loosestrife	*Lythrum salicaria*	LYSA2
quackgrass	*Elymus repens*	ELRE4
quaking aspen	*Populus tremuloides*	POTR (5)
rabbitbrush	*Chrysothamnus* sp.	CHRYS
ragwort	*Senecio* sp.	SENEC
redosier dogwood	*Cornus sericea*	COSE16
reed canarygrass	*Phalaris arundinacea*	PHAR3
Rocky Mountain maple	*Acer glabrum*	ACGL
rose spirea	*Spiraea douglasii*	SPDO
rush skeletonweed	*Chondrilla juncea*	CHJU
saltgrass	*Distichlis* sp.	DISTI
sandbar or coyote willow	*Salix exigua*	SAIN3
Sandberg bluegrass	*Poa secunda*	POSE
scabland penstemon (hot rock penstemon)	*Penstemon deustus* var. *variabilis*	PEDEV2
scabland sagebrush	*Artemisia rigida*	ARRI2
Scotch cottonthistle (Scotch thistle)	*Onopordum acanthium*	ONAC
Scouler's willow	*Salix scouleriana*	SASC
sedge	*Carex* sp.	CAREX
sidebells	*Orthilia secunda*	ORSE
slenderbeak sedge	*Carex athrostachya*	CAAT3
snowberry	*Symphoricarpos* sp.	SYMPH
snowbrush ceanothus	*Ceanothus velutinus*	CEVE
spiny greasebush (Nevada greasebush)	*Glossopetalon spinescens* var. *aridum*	GLSPA
spiny hopsage	*Grayia spinosa*	GRSP
spotted knapweed	*Centaurea stoebe*	CEST8
spruce	*Picea* sp.	PICEA
squirreltail	*Elymus elymoides*	ELEL5
St. Jacob texosporium lichen	*Texosporium sancti-jacobi*	TESA
stinging nettle	*Urtica dioica*	URDI
subalpine fir	*Abies lasiocarpa* var. *lasiocarpa*	ABLAL or ABLA

Plants

Common Name	Scientific Name	Code
Common name	*Scientific name*	Code
tall annual willowherb	*Epilobium paniculatum*	EPPA
tamarisk	*Tamarix* sp.	TMAR2
thinleaf huckleberry	*Vaccinium membranaceum*	VAME
Thurber's needlegrass	*Achnatherum thurberianum*	ACTH7
thymeleaf buckwheat	*Eriogonum thymoides*	ERTH4
tomcat clover (springbank clover)	*Trifolium willdenowii*	TRWI3
transparent milkvetch	*Astragalus diaphanus*	ASDI2
tufted hairgrass	*Deschampsia caespitosa*	DECA (1)
twinflower	*Linnaea borealis*	LIBO3
water birch	*Betula occidentalis*	BEOC2
wavyleaf thistle	*Cirsium undulatum*	CIUN
wax currant	*Ribes cereum*	RICE
western clematis	*Clematis ligusticifolia*	CLLI2
western juniper	*Juniperus occidentalis*	JUOC or JUNIP
western larch	*Larix occidentalis*	LAOC
western needlegrass	*Achnatherum occidentale* ssp. *occidentale*	ACOC3 or ACOCO
white alder	*Alnus rhombifolia*	ALRH2
white fir	*Abies concolor*	ABCO
white top	*Cardaria draba*	CADR
whitebark pine	*Pinus albicaulis*	PIAL
willow	*Salix sp.*	SALIX
willowherb	*Epilobium sp.*	EPILO
winter wheat	*Triticum sp.*	
Woods' rose	*Rosa woodsii*	ROWO
woolly sedge	*Carex pellita*	CAPE42
Wyoming big sagebrush	*Artemisia tridentata* ssp. *wyomingensis*	ARTRW
yellow rabbitbrush	*Chrysothamnus viscidiflorus*	CHVI8
yellow star-thistle	*Centaurea solstitialis*	CESO3

Fish

Common Name	Scientific Name
bull trout	*Salvelinus confluentus*
channel catfish	*Ictalurus punctatus*
Chinook salmon	*Oncorhynchus tshawytscha*
interior redband trout DPS	*Oncorhynchus mykiss*
Lahonton cutthroat	*Oncorhynchus clarki hendersoni*
Pacific lamprey	*Lampetra tridentata*
smallmouth bass	*Micropterus dolomieui*
summer steelhead DPS	*Oncorhynchus mykiss*
westslope cutthroat trout	*Oncorhynchus clarki lewisi*
Yellowstone cutthroat	*Oncorhynchus clarki bouvieri*

Animals

Common Name	Scientific Name
antelope	*Antilocapra americana*
bald eagle	*Haliaeetus leucocephalus*
black bear	*Ursus americanus*
California big horn sheep	*Ovis canadensis californiana*
California quail	*Callipepla californica*
Canadian Lynx	*Lynx canadensis*
chukar	*Alectoris chukar*
Columbia Spotted Frog	*Rana luteiventris pop. 3*
Columbian sharp-tailed grouse	*Tympanuchus phasianellus columbianus*
cougar	*Puma concolor*
elk	*Cervus elephus*
gray wolf	*Canis lupus*
grizzly bear	*Ursus arctos*
Lewis' woodpeckers	*Melanerpes lewis*
long-billed curlew	*Numenius americanus*
mountain quail	*Oreortyx pictus*
mule deer	*Odecoileus hemionus*
peregrine falcon	*Falco peregrinus*
sage grouse	*Centrocercus urophasianus phaios*
Swainson's hawk	*Buteo swainsoni*
Washington ground squirrel	*Spermophilus washingtoni*
wild turkey	*Meleagris gallopavo*
yellow-billed cuckoo	*Coccyzus americanus occidentalis*

Appendix Q: Wildlife and Vegetation Species associated with Riparian Areas

Some of the Species addressed by Appropriate Management of Their Habitat in Stream Channels and Floodplains

Species	Comment
American Dipper	Observed within planning area
American Goldfinch	Observed within planning area
American Robin	Observed within planning area
Arrow-leaf Thelypody	BLM is largest public landowner of sites and habitat and plays major role in management. Much of its suspected habitat has been inventoried. Management actions which could affect include livestock grazing, riparian treatment, road construction/maintenance. The plant is listed as "threatened" by the State of Oregon.
Ash-throated Flycatcher	Observed within planning area
Audubon's Warbler	Observed within planning area
Bald Eagle	Threatened as described in the Endangered Species Act. 1999 USFWS proposed a rule to remove it from the list of Threatened and Endangered Wildlife in the Lower 48 states.
Bank Swallow	Observed within planning area
Barn Swallow	Observed within planning area
Belted Kingfisher	Observed within planning area
Black-billed Magpie	Observed within planning area
Black-capped Chickadee	Observed within planning area
Black-chinned Hummingbird	Observed within planning area
Bobolink	Added at the suggestion of wildlife biologist April 2007
Brewer's Blackbird	Observed within planning area
Brewer's Sparrow	Observed within planning area
Bull trout	Listed as Threatened under ESA
Bullock's Oriole	Observed within planning area
Bushtit	Observed within planning area
California bighorn sheep	Stream channel and function are important habitats, but not as critical as the cliff and canyon land community.
California Quail	Observed within planning area
Calliope Hummingbird	Observed within planning area
Canada Goose	Observed within planning area
Canyon Wren	Observed within planning area
Catfish	Non-native species
Cedar Waxwing	Observed within planning area
Chinook salmon	Monitored by ODFW. Important native game species

Some of the Species addressed by Appropriate Management of Their Habitat in Stream Channels and Floodplains

Species	Comment
Chipping Sparrow	Observed within planning area
Chukar	Observed within planning area Non-native
Cliff Swallow	Observed within planning area
Columbia Cress	This species is not known from lands within the planning area but is suspected due to its habitat (gravel along water courses and alkaline vernal ponds) and its disjunct occurrences in Oregon and Washington (Silver Lake, Multnomah Co., Hanford). It has not been purposely surveyed for and it is unlikely that BLM management would affect this species if it does, indeed, occur on BLM land in the planning area.
Common Merganser	Observed within planning area
Common Nighthawk	Observed within planning area
Common Raven	Observed within planning area
Common Yellowthroat	Observed within planning area
Downy Woodpecker	Observed within planning area
Eastern Kingbird	Observed within planning area
Floater Mussles	Found in John Day River
Gray Flycatcher	Observed within planning area
Great Blue Heron	Observed within planning area
Green-tailed Towhee	Hillary Cooke sampled on local BLM riparian
House Finch	Observed within planning area
House Sparrow	Observed within planning area
House Wren	Observed within planning area
Interior redband trout	Sensitive species
Killdeer	Observed within planning area
Lark Sparrow	Hillary Cooke sampled on local BLM riparian
Lazuli Bunting	Observed within planning area
Least Flycatcher	Observed within planning area
Lewis' Woodpecker	Observed within planning area
Loggerhead Shrike	Observed within planning area
Malhuer mottled sculpin	
Mallard	Observed within planning area
McGillivray's Warbler	Observed within planning area
Middle Columbia Steelhead	Monitored by ODFW. Threatened under ESA
Mountain Chickadee	Observed within planning area
Mourning Dove	Hillary Cooke sampled on local BLM riparian
Northern Flicker	Observed within planning area
Northern Harrier	Observed within planning area
Northern Rough-winged Swallow	Observed within planning area
Olive-sided Flycatcher	Observed within planning area

Some of the Species addressed by Appropriate Management of Their Habitat in Stream Channels and Floodplains

Species	Comment
Orange-crowned Warbler	Observed within planning area
Oregon Junco	Observed within planning area
Pacific Lamprey	Sensitive species
Parry's Sedge	This species is not known from lands within the planning area but is suspected due to its meadow habitat and that it is known from a site in the Burns RD in Grant County. It has not been purposely surveyed for. If it were to be found on BLM land in the planning area, livestock grazing, forest management and access would be the greatest concerns.
Peck's Mariposa Lily	This species is not known from BLM lands within the planning area but is suspected due to its meadow and riparian habitat. A number of sites have been documented in Crook and Wheeler counties, especially in and around Big Summit Prairie. It has not been purposely surveyed for on BLM lands within the planning area. If it were to be found, livestock grazing, forest management, changes in hydrology and access would be the greatest concerns.
Peregrine Falcon	De-listed from ESA in 1999; however, the peregrine is protected by the Migratory Bird Treaty Act.
Red-breasted Nuthatch	Observed within planning area
Red-tailed Hawk	Observed within planning area
Red-winged Blackbird	Observed within planning area
Retrorse Sedge	This species is not known from BLM lands within the planning area but is suspected due to its riparian habitat and widespread collections from such diverse areas as Echo, Sauvie Island, Eugene, and Jefferson and Wasco counties. It has not been purposely surveyed for. Livestock grazing, forestry practices, access and changes in hydrology could all affect this taxon. It is unlikely BLM would play a major management role if it were found on BLM land.
Ring-necked Pheasant	Observed within planning area
Rock Dove	Observed within planning area
Rock Wren	Observed within planning area
Rufous Hummingbird	Observed within planning area
Sandhill Crane	Suggested addition from Wildlife Biologist on April 13, 2007
Say's Phoebe	Observed within planning area
Scalloped Moonwort	This species is not known from BLM lands within the planning area but is suspected due to its riparian habitat and current collections from moist meadows and intermittent springs in the Ochocos and in Grant and Wheeler counties. It has not been purposely surveyed for. If it were to be found on BLM land in the planning area, livestock grazing, forest management, changes in hydrology and access would be the greatest concerns
Small Mouth Bass	Non-native species
Snails	Any perennial spring might have snails that no one has seen before. There are 5 different species found in the planning area. Two of them may already be extinct.
Song Sparrow	Observed within planning area

Some of the Species addressed by Appropriate Management of Their Habitat in Stream Channels and Floodplains

Species	Comment
Spotted Sandpiper	Observed within planning area
Spotted Towhee	Observed within planning area
Stellar's Jay	Hillary Cooke Sampled on local BLM riparian
Tree Swallow	Observed within planning area
Triangle-lobe Moonwort	This species is not known from BLM lands within the planning area but is marginally suspected due to its habitat (wet meadows, streams, and bogs in higher elevation forest) and the fact that it is known from both Grant and Wheeler counties. It has not been purposely surveyed for. If it were to be found on BLM land in the planning area, livestock grazing, forest management, alterations in hydrology, and access would be the greatest concerns.
Turkey Vulture	Observed within planning area
Vaux's Swift	Observed within planning area
Violet-green Swallow	Observed within planning area
Warbling Vireo	Observed within planning area
Western Kingbird	Observed within planning area
Western Meadowlark	Observed within planning area
Western Scrub Jay	Observed within planning area
Western Tanager	Observed within planning area
Western Wood-pewee	Observed within planning area
Westslope Cutthroat Trout	Sensitive species
White-crowned Sparrow	Observed within planning area
Wilson's Warbler	Hillary Cooke sampled on local BLM riparian
Yellow Warbler	Observed within planning area
Yellow-billed cuckoo	Federal Candidate species because of insufficient listing information.

Some of the Species addressed by Appropriate Management of their Habitat in Playas, Ponding, and Lentic Areas

Species	Comment
American Goldfinch	The species may occur in the plan area lentic areas.
American Robin	The species may occur in the plan area lentic areas.
Ash-throated Flycatcher	The species may occur in the plan area lentic areas.
Bastard Kentrophyta	This species is not known from lands within the planning area but is suspected due to its habitat (ponderosa pine and big sagebrush) and its occurrence in the southern portion of the Blue Mountains. It has not been purposely surveyed for. While it is unlikely that BLM management would affect this species if it does, indeed, occur on BLM land in the planning area, any such sites would be important as range extensions.
Black-capped Chickadee	The species may occur in the plan area lentic areas.
Bobolink	Added at the suggestion of wildlife biologist April 2007
California bighorn sheep	This is a locally important species for economics and recreational hunting.
California Quail	The species may occur in the plan area lentic areas.
Chukar	This is a locally important species for economics and recreational hunting.
Columbia Cress	This species requires vernal pools - this is a more seasonal water source.
Cusion Coryphantha	This species is not known from lands within the planning area but is suspected due to its habitat (desert valleys and hills) and collections from Jefferson and Sherman counties. It has not been purposely surveyed for and it is unlikely that BLM management would affect this species if it does, indeed, occur on BLM land in the planning area.
Dwarf Scorpion-weed	This species is not known from lands within the planning area but is suspected due to its habitat (vernally-moist meadows and scablands) and current collections from NW of Prairie City and near Adrich Mtn. It has not been purposely surveyed for and it is unlikely that BLM management would affect this species if it does, indeed, occur on BLM land in the planning area.
Floater Mussles	*Freshwater Mussels of the Pacific Northwest* by Nedeau, and others referenced the presence of these mussels in the John Day River.
Hayden's Cymopterus	This species is not known from BLM lands within the planning area but is suspected due to its habitat (open, rocky and gravelly slopes) and current collections from above Canyon City. It has not been purposely surveyed for and it is unlikely that BLM management would affect this species if it does, indeed, occur on BLM land in the planning area.
Henderson's Ricegrass	This species is not known from BLM lands within the planning area but is suspected due to its habitat (rocky, bunchgrass scablands) and current collections from Grant, Wheeler, Jefferson, Wasco and Sherman counties. It has not been purposely surveyed for. If found on BLM land, concerns would center around livestock grazing management, although the majority of the management responsibility for this species likely would remain with the Forest Service since numerous sites are known there.
Howell's thelypody	This species is not known from lands within the planning area but is suspected due to its alkaline meadow habitat and historic collection from the Big Summit Prairie area. It has not been purposely surveyed for. If it were to be found on BLM land in the planning area, livestock grazing and changes in hydrology would be the greatest concerns. It is currently considered as extirpated from Oregon with historic collections from Crook and Grant counties, and counties to the south.

Some of the Species addressed by Appropriate Management of their Habitat in Playas, Ponding, and Lentic Areas

Species	Comment
Narrow-leaved Sedge	This species is not known from lands within the planning area but is suspected due to its general habitat (open, dry to moderately moist, often grassy places). It has not been purposely surveyed for and is considered extirpated from Oregon. One site is known in Washington. If it were to be found on BLM land in the planning area, livestock grazing, forest management and access would be the greatest concerns.
Porcupine Sedge	Although not extensively surveyed for, the plant is known from about a dozen sites in the planning area, including near McCarty and Hay Creeks, and on Sutton Mountain. Habitat is "wet ground" along streams and meadows. Although BLM has several sites, it likely occurs on private land also, as well as on National Forest land. Therefore, BLM does not play a major role in its management. Activities that could affect the taxon include livestock grazing, access and changes in hydrology.
Raven's Lomatium	This species is not known from BLM lands within the planning area but is suspected due to its rocky scabland habitat and a current collection from near Prairie City. It has not been purposely surveyed for and it is unlikely that BLM management would affect this species if it does, indeed, occur in the planning area.
Sandhill Crane	Suggested addition from Wildlife Biologist April 13,2007
Seaside Helitrope	This species is not presently known from BLM lands within the planning area but is suspected due to its ubiquitous habitat (moist areas and roadsides) and current collections from counties surrounding the planning area. There is also a historic collection from near Moro. It has not been purposely surveyed for. If it were to be found on BLM land in the planning area it is unlikely BLM management would have an impact on the plant.
Sesile Mouse Tail	This species requires vernal pools - this is a more seasonal water source.
Transparent Milkvetch	This plant is known from BLM land in the planning area, and with 22 known sites, BLM plays a major role in the management of this species. Extensive inventory has been conducted for this taxon. Concerns exist related to OHV use, livestock trailing/trampling, horse use, and road improvement. The plant is listed as "threatened" by the State of Oregon. Note: Some authors "lump" this variety with *Astragalus diaphanus*, which is more common in Wheeler, Sherman, Morrow and Umatilla counties.
Triangle-lobe Moonwort	This species is not known from lands within the planning area but is marginally suspected due to its habitat (wet meadows, streams and bogs in higher elevation forest) and the fact that it is known from both Grant and Wheeler counties. It has not been purposely surveyed for. If it were to be found on BLM land in the planning area, livestock grazing, forest management, alterations in hydrology, and access would be the greatest concerns.
Wallowa Rice Grass	This species is not known from lands within the planning area but is suspected due to its habitat (rocky, bunchgrass scablands) and current collections from both Crook and Walowa counties. It has not been purposely surveyed for. If it were found on BLM land in the planning area, BLM likely would have an important role in the species' conservation since sites are few and widely dispersed. Livestock grazing would be the greatest concern.
Yellow-billed Cuckoo	The species may occur in the plan area lentic areas.

Appendix R: Social and Economic Analysis Methodology

This appendix provides more detail about the Social and Economic analyses of environmental consequences of the management alternatives than is provided in the Data, Methods, and Models section of Chapter 4.

Forest Economic Analysis Spreadsheet Tool (FEAST)

The FEAST analysis used in Chapter 4 assesses the economic impacts of the resource outputs projected under each alternative. Resource outputs in this context are the amount of a resource (e.g., timber volume, AUMs, recreation visits etc.) that would be available for use under each alternative. Average annual resource outputs were projected by resource specialists for each alternative for the short term (10-year) planning period based on the best available information and professional judgment. Impacts to economic well-being are measured in terms of employment and labor income.

Employment and Labor Income

Employment and labor income estimates developed for this analysis include direct, indirect, and induced economic effects. Direct employment would, for example, be generated in the logging and sawmill sectors. Additional employment would be generated as the affected logging and sawmill operations purchase services and materials as inputs ("indirect" effects) and employees spend their earnings within the local economy ("induced" effects).

Theoretically, expenditures associated with changes in final demand would be available and specific enough to allocate to each of the 528 sectors contained in the IMPLAN model. In the absence of primary data, national level production functions are used. Expenditures should be delineated between local and non-local providers, as purchases out of the economic study region will have no local economic impact. IMPLAN's data contains information, called regional purchase coefficients, that describe the proportion of a given commodity that will be provided by local producers. Previous modeling experience has shown that the data contained in the IMPLAN modeling system for the various sectors are an accurate representation of impacts.

Potentially affected social groups

The social analysis assesses the potential effects of different management actions on potentially affected social groups. These groups were identified based on studies contracted for this RMP (Preister 2006), the results of public scoping and comments received after the release of the Analysis of the Management Situation. This analysis addresses the potential impacts of the alternatives based on the issues and concerns raised by these groups during the public scoping process. The analysis draws upon ongoing discussions between the BLM and potentially affected publics, as well as discussions with subject matter experts involved in other parts of the analysis. The analysis is primarily qualitative with potential impacts ranked by alternative. Quantitative measures, such as acres in protected areas, harvest volumes, and recreation visitation, are used, as appropriate.

Environmental Justice

The environmental justice analysis assesses the potential for the alternatives to have disproportionately high and adverse human health or environmental effects on minority and low income populations. The fair treatment and meaningful involvement of people of all races, cultures, and incomes in this planning process is also considered.

Appendix S: Snags and Salvage

Retention of Snag Pulses:
The following methodology describes how to identify an appropriate analysis area and measure the amount of area within a snag pulse. A snag pulse is an area at or above the 80% tolerance interval (see glossary and table below) by habitat type (DecAID, 2007).

To calculate the size of the analysis area needed for snags pulses:
Acres of Habitat type affected by high mortality (insect epidemic, fire, etc.) divided by 0.2 gives the total acres of that habitat type that should be included in the analysis area. The size of the total analysis area would be the cumulative amount of each habitats resultant value. Minimum allowable analysis area would be 12,800 acres.

Habitat type	Acres with high mortality	Divided by 0.2
East Side Mixed Conifer	2,000	10,000
Ponderosa Pine/Douglas Fir	1,000	5,000
Lodgepole Pine Forest and Woodlands	500	2,500
	Total Analysis Area Needed	17,500

Start by delineating a contiguous area which encompasses the amount of area identified in the step above for the habitat type that encompasses the largest amount of acreage. Make the area logical in terms of watershed or administrative boundaries. One option is to start with the 5th field HUC the project falls within and then add 6th field HUCs along the perimeter until the area requirement is met. The analysis area must contain the necessary acres for each habitat type.

Once the analysis area is identified a review of each habitat type within the analysis area will be made to determine the number of acres meeting the 80% tolerance level for snag densities listed in the table below. > 10" (Total) numbers provide a sufficient review. Areas are identified through the use of recent fire information, insect surveys, aerial photo interpretation or other broad data sources. If more detailed snag density information exists the > 20" data can be used.

Snag Densities per Acre at the 80% Tolerance Interval

Habitat Type	Structure	> 10" (Total)	> 20"
East Side Mixed Conifer - Blue Mountains	Large Tree	21.21	9.11
	Open	58.32	12.79
	Small	25.25	8.62
Ponderosa Pine/Douglas-fir	Large Tree	13.27	10.76
	Open	15.58	5.30
	Small	7.16	2.51
Lodgepole Pine Forests and Woodlands	Large Tree	No Data	No Data
	Open	26.59	4.25
	Small	27.64	6.64

Multiply the total acres of each habitat type in the analysis area by 0.2 (expected pulse acres) then subtract the number of acres determined to be meeting the 80% tolerance level for each habitat type (existing pulse acres).

Example:

Total East Side Mixed Conifer – 40000 * 0.2 =	Expected Pulse Acres of	8,000
	Existing Pulse Acres	8,500
	Acres available for Salvage	500

If the resultant number is positive, that is the number of acres available for salvage logging. If the number is negative, the manager should consider not salvaging or retaining snag levels at the 80% tolerance level on salvage acres.

GPO U.S. GOVERNMENT PRINTING OFFICE: 2008 — 776-069 / 21005 Region No. 10

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